

COMORBIDITY

PERSPECTIVES ACROSS EUROPE

Edited by

Alex Baldacchino
John Corkery

European Collaborating Centres in Addiction Studies



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In collaboration with the Centre for Addiction Research and Education Scotland (CARES) and other European academic addiction institutions.

Foreword - Comorbidity

Interest in the effect of substance misuse on the individual's mental health dates back a few centuries now. Since then the problem has diversified because of the phenomenon of multiple drug use and the higher prevalence of psychotropic drug use. There is now also recognition of the importance of diagnosing and treating mental health related problems. The combination of polysubstance use and dependence, the increasing prevalence of mental health problems and a societal recognition of the potential problematic consequences to the individual is the subject of this monograph.

Comorbidity is a condition describing the presence of two or more diagnosable conditions happening, either at the same time or having a close temporal relationship, to the same individual. This is usually more focused on the presence of psychological/psychiatric problems and associated polydrug use and misuse. The monograph tries to identify and clarify some theoretical concepts related to the subject of mental health problems and substance misuse by studying the latest research on comorbidity in a European context. This provides a basis for understanding comorbidity in a holistic manner and allows the opportunity to appreciate the different levels of vulnerability to this condition.

The monograph then describes several examples of good practice and approaches to this issue through a description of services in all parts of the European continent. It allows the reader to appreciate the commonalities as well as the differences present in these scenarios and shows that communities may approach comorbidity service provision in different ways but may come up with the same solutions to the problem.

The European Collaborating Centres in Addiction Studies' Comorbidity Monograph is an attempt to identify the common issues of comorbidity across the socio-cultural contexts of European countries in relation to the nature and recognition of the problem. It also examines the policies and practices in the care of individuals with comorbid mental health and substance misuse problems. It is quite evident that there are common features and similarities of views and practices but there are also differences, even within the same country, between practitioners in the field in the way they see the most appropriate interventions. Although everybody agrees that adequate counselling, support and social care is essential, not everyone shares the same view about the type of services needed, the therapeutic model or the role of pharmacotherapy in a condition that is still not well recognised nor adequately financially resourced. However it is quite clear that there must be close co-operation and collaboration not only between the various agencies looking after individuals with comorbid conditions but between the vulnerable individual and the members of the therapeutic teams.

The authors of different chapters take full responsibility and authority for the information and data they have provided in their papers. ECCAS, as an organisation, does not necessarily share all the views and opinions expressed in this monograph. The collection of these papers in this form provides a

wealth of expert opinion and professional practice in different parts of Europe. ECCAS is delighted that experts from member countries have undertaken this scholarly review and have shared their knowledge and experience on this very important aspect of the care of the individuals with substance abuse and dependence problems. ECCAS is grateful to the editors and the authors of this very valuable document, which is another step towards fulfilling one of the important objectives of the organisation.

Professor Hamid Ghodse

Director, International Centre for Drug Policy and
President European Collaborating Centres in Addiction Studies

June 2006

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Part I

Introduction

Chapter 1 Definition and classification in comorbidity

J M Corkery and A Baldacchino

Introduction

"[T]he current psychiatric debates about systems of classification, the many hypothetical and unconfirmed schemas of "psychodynamic mechanisms", and the concern with etiological inference rather than observational evidence are nosologic activities sometimes reminiscent of those conducted by the mediaeval taxonomists." - A R Feinstein quoted by A J Lewis (WHO, 1974)

What progress has been made in the last three decades or so to dispel such a view? This chapter sets out to assess what has happened since that time in the classification and definition of comorbidity, especially with reference to co-occurring substance misuse and other (mental) disorders.

By way of introduction, the growing importance of comorbidity and its related problems are discussed before turning to an examination of why definitions and terminology are needed in investigating such phenomena. Definitions of substance misuse and their relationship to comorbidity are outlined since these are key elements in the narrow definition of comorbidity that now pervades psychiatry. Consideration is then given as to whether or not the terms 'comorbidity' and 'dual diagnosis' are useful in the measurement of psychiatric disorders. The Chapter then goes on to outline explanations of and models for comorbidity, and how it presents itself in clients.

Approaches to the measuring of psychiatric disorders are then explored, before looking in detail at the measurement of comorbidity using the Diagnostic and Statistical Manual (DSM) and the International Classification of Diseases (ICD). Some of the problems encountered in using these classification systems are then outlined, together with what alternative systems would have to achieve. Some conclusions are drawn concerning the issues outlined above.

Background

Although comorbidity is a long-standing phenomenon, Feinstein (1970) was the first researcher in psychiatry to emphasise the term. Since the mid-1980s it has increasingly become the subject of mounting interest by health researchers, practitioners, policy-makers and service providers. Evidence of this may be seen in the fact that several learned journals have thought it necessary to devote special issues or supplements to the topic (see, for example, Wittchen, 1996a; Crawford *et al.*, 2003; Jenkins and Meltzer, 2003; Abou-Saleh, 2004).

This increased interest may be associated with the introduction of explicit descriptive, operational criteria for specific mental disorders and related shifts in paradigms in psychopathological research (Klerman 1990). Farrell *et al.*

(2003) point to the fact that the growth of research into molecular genetics and other aspects of biological psychiatry have provided additional opportunities to develop aetiological models for understanding individual vulnerability, mediating factors and possible therapeutic options for the management of a range of psychiatric disorders.

Concern grew as it became more and more apparent that comorbidity was emerging as and continues to become a major public health problem (World Development Report, 1993). Pressures on health service delivery and the emergence of competing approaches to the organisation of mental health services have both served to emphasise this burden.

Farrell *et al.* (2003) think it possible that these new pressures on providers of mental health services have resulted in increased attempts to limit the remit of different providers and the development of case-mix in determining the resources made available for interventions. These developments have given rise to a greater focus being given to diagnostic groupings in some health care settings. There has been a tendency in some specialist services to disown the problems of these different groupings (i.e. the seriously mentally ill with problematic substance misuse within general psychiatric services and those with personality and other psychiatric disorders within addiction services). This has been further complicated by an assumption that each population belongs to the counter-part service. The result is that people with comorbidity are left in 'No Man's Land' or to fall 'between the cracks' (Abou-Saleh, 2004).

The overall result of a combination of models concerning aetiology, nosology and service delivery has been a major growth in the published literature and policy interest in the field of psychiatric comorbidity (Farrell *et al.*, 2003). Despite this increased interest, the impact of clinical and practical issues remains to be fully appreciated (Rassool, 2002).

Comorbidity is not only an issue among clinical populations but also in the general population in many countries (see, for example, Regier *et al.*, 1990; Hall *et al.*, 2002; Frisher *et al.*, 2004; Abou-Saleh and Janca, 2004; Samet *et al.*, 2004). Many of those reporting substance misuse have undergone some other form of mental disorder at some point in their lives; many psychiatric patients have a history of past or current substance use. Clinicians face a particular challenge from the co-existence of mental disorders and substance use problems as they combine to produce greater impairment of function and substantially poorer health than would normally be attributed to either on its own (Holland, 1999).

Consequences of comorbidity

Patients with comorbidity have a poorer prognosis. The most consistent predictor of a poor treatment outcome for clients in treatment for substance misuse is the presence of psychopathology (McLellan *et al.*, 1983; Rounsaville *et al.*, 1987). Similarly, substance misuse is a predictor of poor treatment outcome for mentally ill patients (Drake and Wallach, 1989; Carey

et al., 1991). Research evidence suggests that drug treatment outcomes improve if mental disorders are treated (e.g. Woody *et al.*, 1985).

A variety of negative outcomes are associated with comorbidity: higher rates of relapse (Swofford *et al.*, 1996) and rehospitalisation (Linszen *et al.*, 1994); hospitalisation (Haywood *et al.*, 1995; Maynard and Cox, 1998); violence (Cuffel *et al.*, 1994); arrest and imprisonment (Abram and Teplin, 1991; Clark *et al.*, 1999); homelessness (Drake *et al.*, 1991; Caton *et al.*, 1994) and poorer housing stability (Osher *et al.*, 1994); and serious infections such as HIV and hepatitis (Rosenberg *et al.*, 2001).

Those with a comorbid condition place a heavy burden on a range of public services (Hall, 1996). This is especially so if individuals present with a combination of problems, e.g. a severe psychotic disorder, substance misuse, as well as with a constellation of social issues (homelessness, poverty, criminality, unemployment, marginalisation, etc.). A particular strain is placed on acute psychiatric services (Regier *et al.*, 1990; Kivlahan *et al.*, 1991). The costs of providing treatment for those with comorbidity are disproportionately higher than for those with psychiatric disorders that do not misuse substances; this is also true of those with substance use disorder (SUD) alone (Hoff and Rosenheck, 1998). The principal reason for these higher costs is the increased use of institutional services such as hospitals and prisons by such individuals (Bartels *et al.*, 1993).

Increases in impulsive, aggressive and disinhibited behaviours, as well as increases in anxiety, depression and self-harms have been associated with the co-existence of substance use and mental health problems (Evans and Willey, 2000). Social problems, difficulties with activities of daily living, worsening of physical health and significant legal and financial difficulties may also result (McDermott and Pyett, 1993). Self-destructive and antisocial behaviours may develop in extreme situations, leading to homelessness, disengagement from family and community, and the exhibiting of high-risk activities including offending, intravenous drug use, needle-sharing, suicide attempts, unsafe sex, and binge consumption (Bartels *et al.*, 1992; McDermott and Pyett, 1993, Murray *et al.*, 1999). There is decreased likelihood of sustained recovery from either of the conditions and an increased risk of early mortality (Evans and Willey, 2000; Mueser *et al.*, 1992; RachBeisel *et al.*, 1999).

There has been growing public and governmental concern about the consequences of mental and substance misuse disorders - both for the individuals concerned and for its impact on the wider society. In the context of the United Kingdom, such concerns have been evident since the early 1990s, e.g. the introduction in 1991 of the Care Programme Approach to provide a framework for the care of mentally ill people (HMSO, 1994); the Department of Health's Confidential Inquiry into homicides and suicides by mentally ill people (Appleby *et al.*, 2001); the development in 1995 of a national drugs strategy and subsequent updates (HMSO, 1995; Home Office, 2002) and, more recently, a national alcohol strategy (Cabinet Office, 2004). Other countries have also developed similar approaches. Australia, for example, includes the issue of comorbidity in both the National Drug Strategic Framework (1998/9 -

2002/3) and the Second National Mental Health Plan (1998-2003) (McCabe and Holmwood, 2003). The European Monitoring Centre for Drugs and Drug Addiction included a special section on comorbidity in its Annual Report for 2004 and issued a policy briefing on the subject in the 20 official EU languages and Norwegian (EMCDDA, 2004; 2005).

The need for definitions and terminology

Three decades ago Sir Aubrey Lewis observed that the task of a psychiatric glossarist is more difficult than that of an ordinary compiler of medical classifications - and that is difficult enough - because it is subject to a paucity of objective data on which definition and diagnosis must depend (Lewis, 1974, reproduced in WHO, 1978:5-6). The objective of the glossarist or taxonomist is to come up with appropriate criteria for differentiating one disease from another, ideally one consistent schema into which they will all fit. Such a schema may be founded on a number of bases: clinical patterns (syndromes) or clinical course; psychodynamic; aetiological (genetic); or pathological. Since diseases themselves are nothing but abstract concepts, it is no surprise that the disease constructs with which psychiatrists have to work have hazy outlines like mirages and overlap. As we will see below, concepts also change their focus over time, being influenced by a range of factors.

The glossary on mental disorders produced by the World Health Organisation (WHO, 1978) for use with the ninth revision of the International Classification of Diseases (ICD-9) points out that no classification of diseases can be used satisfactorily unless some indication is given of the meaning of its constituent terms. A set of descriptions, and if possible definitions, of the terms making up a classification is a glossary. The glossary for ICD-9 had to be composed of descriptions of symptom patterns and syndromes rather than clear-cut or mutually exclusive definitions. This is because "diagnosis by means of a few pathognomonic signs or symptoms is uncommon in psychiatry; in most instances, psychiatric disorders are differentiated from one another by the recognition of different patterns of emphasis among a comparatively small number of symptoms" (WHO, 1978:10).

Towards the end of the 1970s it became increasingly clear that many key psychiatric terms were acquiring very different meanings in different countries. Without uniformity of usage of descriptive and diagnostic terms, very little meaning can be given to the diagnostic element of mental illness statistics based on classification schemes such as the Diagnostics and Statistical Manual (DSM) and ICD. Furthermore, communication both among psychiatrists and with other health professionals becomes difficult. International glossaries are now becoming available (see, for example, WHO, 1974, 1978, 1994; UNODCCP, 2000). The use of such glossaries can assist health professionals from different countries and schools of thought in understanding each other's concepts and work. Where psychiatrists, and others, find 'standard' glossaries do not fully meet their special research or clinical interests and needs, they should make it clear in their write-ups how their terms can be converted into those of the glossaries, DSM or ICD.

Definitions of substance misuse and their relationship to comorbidity

Before turning to the main topic of this monograph - comorbidity - it is important to briefly consider the way(s) in which substance misuse is defined. This is because it is central to modern-day concepts and definitions of comorbidity and dual diagnosis.

The operational use of concepts of substance use and misuse rely heavily on aetiology, clinical practice, particular cultures, and ideology (Todd *et al.*, 2004) as well as the purpose(s) behind their use (Rassool, 2002:14). Berridge points out that "definitions of alcoholism and drug addiction are historically constructed, are the products of particular historic sets of circumstances and interrelationships (Berridge and Edwards, 1987; Scull, 1981). Disease concepts, for example, may have been common in the 1890s and 1950s, but the components of the theoretical basis were very different in those decades" (Berridge, 1993:179).

Many terms have been used over the last century or more to describe or define problems related to the use of alcohol, drugs and other substances. Some of these terms are, to say the least, very ambiguous and fluid. It is important to appreciate the latter point since these terms are in turn employed in some of the descriptions or definitions of dual diagnosis, comorbidity, etc. The definition of addiction, dependence, etc. is key to intervention with substance abusers as it classifies abusive drug/drinking behaviours and impacts on the type(s) of treatment that is given. Below is a brief overview of some of the relevant terms and how they have evolved.

Addiction

Some writers have suggested that 'addiction' was discovered in the nineteenth century, or even the eighteenth century. Levine (1978), for example, argued that at some point in the eighteenth century drunkenness was reconceptualised from being a sin into a habit or disease (Berridge, 1993:181). The process of reconceptualisation of substance use and misuse has occurred many times in the intervening period, and no doubt will continue as more information is discovered that extends our understanding of the phenomena.

Up until the early twentieth century addiction was seen in Britain as more of a social or criminal problem than as a medical one. There was a sea-change in approach following the Hague Convention of 1912 and problems encountered in the supply of cocaine and other drugs (such as morphine and pharmaceutical heroin) to the military during the First World War. Addiction started to be seen as a medical issue, a disease with public health consequences (Spear, 2002).

According to Spear, the Rolleston Committee (Ministry of Health, 1926) regarded addiction to morphine and heroin as "a manifestation of disease and not as a mere form of vicious indulgence". However, the Committee was very careful to point out that "addiction may be acquired by injudicious use of the

drug in a person who has not previously shown any manifestation of nervous or mental instability" (quoted in Spear, 2002:190).

Thirty-five years later, the First Brain Committee was in no doubt that "addiction should be regarded as an expression of mental disorder rather than a form of criminal behaviour" (Ministry of Health and Department of Health for Scotland, 1961, paragraph 27). The Second Brain Committee saw the addict as a "sick person", and offered the following definition of an addict - "A person who, as a result of repeated administration, has become dependent upon a drug controlled by the Dangerous Drug Act [1965] and has an overpowering desire for its continuance, but who does not require it for the relief of organic disease" (Ministry of Health and Scottish Home and Health Department, 1965, paragraph 17). In 1966 Lord Brain told the British Medical Association that "Drug addiction was basically a complex psychiatric problem made all the more complex by the coexistence of physiological disturbances" (BMJ, 1966, quoted in Spear, 2002:190). The approach to addiction of the Second Brain Committee exemplifies a unified approach to the phenomenon. The dual focus on disease and social problems led to addiction being seen as a 'socially infectious disease' (Berridge, 1993:184).

The terms 'addiction' and 'habituation' (becoming accustomed to any behaviour or condition) were abandoned by the WHO in 1964 in favour of 'drug dependence'. This was a shift from an 'all or nothing' discrete disease entity to a concept that recognises various degrees of severity of a disease, as well as its signs. Alcoholism too was, according to Berridge (1993), reconceptualised during the 1970s by the WHO. The 1977 WHO definition separated the central strand of the 'alcohol dependence syndrome' from the concept of 'alcohol-related disabilities' and the 'dependence approach' from the 'problems approach' (WHO, 1977). In the 1970s and 1980s the 'dependence approach' was used by behaviourally-oriented psychologists and psychiatrists as a reformulation of the disease concept.

Berridge argues that there has been a fragmentation of the overall conception of target disorders into the 'dependence' and 'problems' approaches for both alcoholism and drug addiction. Some of the primary factors for this fragmentation process have included: "the emergence of a 'professionalized', non-medical cadre of researchers around alcohol [and drugs], most significantly sociologists and epidemiologists; and the establishment of parallel non-medical practitioners as professionals, with social workers as the obvious example (Collins, 1990; Room, 1983)" (Berridge, 1993:185). However, she argues, psychologists have provided a bridge between the two approaches. The increasing emergence of comorbidity as an issue that cuts across many areas of public policy and individual medical needs has helped build structures that bridge the divide between these dimensions.

The WHO (1994) defines addiction as: the repeated use of a psychoactive substance or substances, to the extent that the user (referred to as an addict) is periodically or chronically intoxicated, shows a compulsion to take the preferred substance (or substances), has great difficulty in voluntarily ceasing or modifying substance use, and exhibits determination to obtain psychoactive substances by almost any means.

Addiction can also be regarded as a bio psychosocial disorder (Garrett, 2002). Biologically, addiction resides in the neurotransmitters of the brain. Essentially, mood change can be accomplished through the ingestion of a substance or engaging in an activity that successfully alters the chemistry of the brain in the desired direction. The drug or activity must be powerful, rapid in impact, and either reduce pain or enhance pleasure.

Psychologically, addiction is the management of the feelings associated with a problem instead of a response aimed at the actual problem; the addict is trying to be happy by manipulating feeling states rather than coping with reality (Hoskins, 1989:37). The preferred drug or activity will fit with an individual's existing patterns for managing psychological threats (Milkman and Sunderwirth, 1987:xiv).

Socially, patterns of addiction occurring may be sustained in interactions with other individuals, groups and societal institutions. The addict attempts to create a social structure which supports the addictive patterns while fighting off elements which interfere with them.

Addiction can be seen as a state involving the whole person - a way of living. Compulsivity rather than physical adaptation is central to this concept (Royce and Scratchley, 1996). In a broad sense, addiction can include activities other than the consumption of certain types of substances; it can cover activities such as gambling, playing computer games, and surfing the internet. A central element present in most of the definitions presented here is the key characteristic of impaired control over substance use. The consumer's relationship with it becomes primary and all-consuming.

Dependence, dependence syndrome

Since the 1960s, the terms 'dependence' and 'dependence syndrome' have gained favour with the WHO and in other circles as alternatives to 'addiction'. The term dependence has been regarded as comparable to addiction in that a substance user has adapted physically and/or psychologically to its presence and would suffer if it was to be withdrawn (RCP, 2000). The WHO (1994) defines them as follows: as applied to alcohol and other drugs, a need for repeated doses of the drug to feel good or to avoid feeling bad. The DSM-IV (APA, 1994) defines dependence as "a cluster of cognitive, behavioural and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems".

Physical dependence

Physical dependence has to be distinguished from addiction. It can be seen as "a state of bodily adaptation to the presence of a particular psychoactive drug" (Rassool, 2002:17). Physical dependence is a normal result of the sustained consumption of a substance such as alcohol and certain other drugs. After a certain time everyone who takes the substance in a sufficient dose will experience a withdrawal syndrome characteristic of the particular substance if this is suddenly stopped or markedly reduced. But only a minority of individuals who develop such a physical dependence will go on to

become addicted to the substance. In this context, addiction is taken to mean a behavioural syndrome characterised by prolonged, excessive and harmful use of the substance.

In the current official diagnostic systems the term dependence is used instead of addiction. This further complicates and confounds the distinction between physical dependence and addiction, since dependence is not the same as physical dependence. The matter is even more complex because most of the substances that are involved in the behavioural syndrome of addiction (or substance dependence) are in fact capable of causing the condition of physical dependence (i.e. capable of causing withdrawal syndrome).

Psychological dependence

Someone who is psychologically dependent believes that he cannot do without whatever it is he happens to be dependent upon. He has a compulsion or craving to continue to take a substance (or indulge in a particular activity) because of the need for stimulation, or because it relieves anxiety or depression (Rassool, 2002:17).

According to Di Chiara *et al.*, (2004) there is no real distinction, in biological terms, between psychological and physiological bases of dependence.

Substance dependence

The fourth revision of the Diagnostic and Statistical Manual (DSM-IV) describes substance dependence as a maladaptive pattern of substance use leading to clinically significant impairment or distress as manifested by three (or more) of the following occurring at any time in the same 12-month period (APA, 1994: 181).

- Use of larger amounts or over a longer period than was intended.
- Persistent desire (craving) or unsuccessful efforts to cut down or control substance use.
- Preoccupation - a great deal of time is spent in activities necessary to obtain the substance (e.g. visiting multiple doctors or driving long distance), use the substance (e.g. chain smoking), or recover from its effects.
- Important social, occupational, or recreational activities are given up or reduced because of substance abuse.
- Use continues despite knowledge of having a persistent or recurrent psychological or physical problem that is caused or exacerbated by use of the substance.
- Tolerance - as defined by either (a) need for increased amounts of the substance in order to achieve intoxication or desired effect; or (b) markedly diminished effect with continued use of the same amount.
- Withdrawal - as manifested by either (a) characteristic withdrawal syndrome for the substance; or (b) the same (or closely related) substance is taken to relieve or avoid withdrawal symptoms.

The substance dependence is specified as being with (evidence of tolerance or withdrawal) or without physiological dependence. The substance

dependence is also specified according to course, e.g. remission status; use of agonist therapy; or being in a controlled environment.

The DSM-IV definition differs from the traditional definitions of addiction and dependence since it is no longer necessary for patients to have the three criteria of tolerance, withdrawal (physical dependence) and compulsion (psychological dependence); they are sufficient but not necessary for a diagnosis of 'dependence'. The textual revision of 2000 - DSM-IV-TR (p. 98) - defines dependence by specifying it as follows: (a) with physiological dependence - evidence of tolerance or withdrawal (i.e. tolerance or withdrawal is present); (b) without physiological dependence - no evidence of tolerance or withdrawal (i.e. neither tolerance nor withdrawal is present).

The tenth revision of the International Classification of Diseases (ICD-10) states that diagnosis of the Dependence Syndrome involves at least three of the following occurring together for at least one month, or repeatedly within a 12-month period (WHO, 1994:79-81).

- Compulsion.
- Impaired capacity to control substance use.
- Physiological withdrawal.
- Tolerance.
- Preoccupation.
- Continued use despite harmful consequences.

The syndrome may be specified by current status of abstinence; client placement in a controlled environment; use of a replacement drug, e.g. methadone; blocking drugs, e.g. naltrexone; or currently active. Further specifiers, if desired, are continuous or episodic use.

Substance abuse

This term is widely used but has a variety of meanings. In international drug control conventions 'abuse' refers to any consumption of a controlled substance no matter how infrequent. In the DSM-IV it is treated as a residual category, with dependence taking precedence whenever applicable.

ICD-10 only uses the term 'abuse' for non-dependence-producing substances because of its ambiguity (WHO, 1992). 'Harmful' and 'hazardous use' are the equivalent terms in WHO usage, but they only usually relate to effects on health and not to social or legal consequences (UNODCCP, 2000).

For harmful use the damage to health may be physical (e.g. hepatitis following injection of drugs) or mental (e.g. depressive episodes secondary to heavy alcohol consumption). It is worth remembering that harmful use often has adverse social consequences.

'Hazardous' use is where the consumption of a drug leads to harm or dysfunction (WHO, 1981). It is a pattern of substance use that increases the risk of harmful consequences for the user or those affected by their behaviour. This risk may be associated with health consequences of chronic, long-term

drug use or to the immediate consequences of intoxication, possibly including social consequences such as marital discord and impaired work performance. Another distinction between harmful and hazardous use is that hazardous use refers to patterns of use that are of public health significance despite the absence of any current psychiatric disorder in the individual user (UNODCCP, 2000).

Substance abuse is a destructive pattern of substance use, leading to significant social, occupational, or medical impairment. It can be thought of as problematic use that does not rise to the level of substance dependence. By definition, all substance dependence includes substance abuse. But substance abuse may, and sometimes does, occur without the presence of the full substance dependence syndrome.

The term substance abuse is regarded by many as being value-laden and is not widely used in the UK. However, in the USA it is used by practitioners to refer to problems of alcohol or other mood-altering drugs and use the term addictive disorders when the problems have worsened to the level of dependence (Sullivan, 1995). Within the US context, substance abuse is used in two different ways: (a) diagnostically - "intermittent impaired control of substance use and represents a stage in the spectrum of substance use disorders"; and (b) colloquially - "drug use that violates social standards or causes self-harm" (Fleming *et al.*, 1996).

Substance/drug misuse

The term drug misuse is used interchangeably with substance misuse. It may be simply defined as the consumption of a psychoactive substance in a way that it was not intended for and which causes physical, social and psychological harm. The term has also been used to describe certain patterns of use: dependence, experimental, and recreational (Rassool, 2002:15). Substance use disorders are also often encountered amongst those with anxiety, affective and personality disorders (Hall *et al.*, 2002).

What is a drug?

The word or term 'drug' has a range of meanings. In the various United Nations conventions it refers to substances subject to international control. In medicine, it refers to any substance with the potential to prevent or cure disease or enhance physical or mental well-being. From a pharmacological viewpoint, drug means any chemical agent that alters the biochemical or physiological processes of organisms or tissues (UNODCCP, 2000).

'Drug' is commonly used here to refer specifically to psychoactive drugs and often, more specifically, to illicit drugs. However, there are many other substances commonly taken in for non-medical purposes that are drugs in the sense of being taken primarily for their psychoactive effects; for example, alcohol, caffeine and tobacco.

In the context of this monograph, the term 'substance' is being taken to include the following - alcohol, illicitly manufactured drugs, conventional pharmaceutical products (medicaments), tobacco, and volatile substances/solvents.

Comorbidity or dual diagnosis?

Although the term comorbidity is frequently used in research and practice it is neither clearly conceptualised nor well defined (Maser and Cloning, 1990). For example, it has even been used in many clinical studies in a loose way to describe any type of association between psychopathological phenomena, regardless of whether the phenomena met the criteria for a mental disorder (Witched, 1996c). Van Praag (1996) even goes so far as to suggest that the term comorbidity blurs rather than clarifies the complicated diagnostic problems with which clinicians have to deal.

Comorbidity

There are several definitions of comorbidity. At a general medical level it simply means the presence of co-existing or additional diseases with reference to an initial diagnosis or with reference to the index condition that is being examined. Feinstein (1970:456-7) describes it as "any distinct additional clinical entity that has co-existed or that may occur during the clinical course of a patient who has the index disease under study". The epidemiological studies of the 1980s focused more on the methodological aspects of comorbidity by defining it as the relative risk for a person with one disorder to acquire another. Wittchen *et al.* (1996) give a somewhat simpler one, derived from a methodological paper by Burke *et al.* (1990): "the presence of more than one specific disorder in a person in a defined period of time". This definition, in Wittchen's (1996c) view stresses a number of things: (a) clearly defined descriptive classes (i.e. disorders instead of illnesses); (b) a broader perspective of comorbidity to a lifetime perspective; and (c) various definitions of the time-frame of assessment (i.e. current, six months, one year). This approach emphasises the longitudinal view of comorbidity.

Such definitions cover the co-occurrence of two (or more) physical diseases (e.g. circulatory problems and diabetes) which are defined in terms of their underlying cause (e.g. a bacterial infection or a patho-physiological process). In principle, the notion of comorbidity embraces the co-occurrence of mental and physical disorders.

In the field of mental health the term is more often applied in a narrow way to the co-occurrence of two (or more) different mental disorders. The conditions usually given as examples are substance use disorders (such as alcohol or other drug abuse or dependence) and psychotic disorders (e.g. bipolar disorder or schizophrenia) which are described in terms of their characteristic symptoms rather than their underlying causes. The term comorbidity does not make assumptions as to whether substances have been abused or if a relationship exists between the two (or more) conditions.

Other criteria can be used to define types of comorbidity, for example (a) the similarity across classes of disorders or (b) the period of time in which the disorders happen. The co-occurrence of different classes of mental disorders, such as substance use and another mental disorder, has been termed heterotypic and is to be differentiated from homotypic comorbidity. The latter is where there is co-occurrence between different members of a general class of mental disorder, e.g. alcohol and other drug use disorders.

Another criterion for differentiation is concurrent versus successive comorbidity. Concurrent means that two (or more) disorders are present at the same time, e.g. schizophrenia and alcohol dependence. When disorders occur at different times during a person's life (whether causally related or not) this is termed successive comorbidity.

Caron and Rutter (1991) have argued that in some instances comorbidity may be an artefact of the criteria used to define disorders. That is, the criteria for one disorder may overlap with those used to define a second disorder with the result that supposedly separate mental disorders may not be as separate as they seem. This type of explanation may be plausible for homotypic comorbidity but not for heterotypic comorbidity, such as between substance misuse disorders and anxiety and addictive disorders.

Wittchen (1996c) argues that in a strict sense the definition provided by Feinstein (1970) cannot be easily applied to many studies of the previous decade that examined epidemiological and clinical issues. Such studies have mostly used comorbidity as a descriptive term to simply mean the overlap of diagnostic classes without providing explicit clinical and nosological considerations. None of these definitions are universally accepted. In addition, there is no comprehensive and coherent theoretical framework for comorbidity that would allow the integration of many disparate research findings.

It is perhaps not surprising that substantial confusion has been generated in the past by the lack of clear boundaries between the major classes of disorders defined by classifications such as DSM-III and ICD-10. This has resulted in some commentators suggesting that comorbidity is an artefact of splitting diagnoses (such as those in the DSM) into separate classes when they actually belong together. In contrast to this 'splitting' approach, those in the 'lumper' position favour the traditional nosological search for commonalities in disorders in an attempt to identify methods for grouping disorders together, e.g. based on shared vulnerabilities (Wittchen 1996b). The 'lumper' approach was supported by the fact that, at least up to the time when Wittchen was writing (1996), there was only very limited agreement about the therapeutic and prognostic implications of a descriptive approach to comorbidity (Wittchen, 1996c). This lack of consensus on a definition of the term has resulted in a great range of variation in the magnitude of comorbidity across studies and surveys.

Dual diagnosis

Another term used extensively in the mental health field is dual diagnosis. The WHO (1994) defines dual diagnosis as:

"A general term referring to comorbidity or co-occurrence in the same individual of a psychoactive substance use disorder and another psychiatric disorder. Such an individual is sometimes known as a mentally ill chemical abuser (MICA). Less commonly, the term refers to the co-occurrence of two psychiatric disorders not involving psychoactive substance use. The term has also been applied to the co-occurrence of two diagnosable substance use disorders. Use of this term carries no implications of the nature of the association between the two conditions or of any etiological relationship between them."

The definition used by the United Nations Office on Drugs and Crime (UNODCCP, 2000:24) is adapted from the WHO one. An individual with dual diagnosis is:

"A person diagnosed as having an alcohol or drug abuse problem in addition to some other diagnosis, usually psychiatric, e.g. mood disorder, schizophrenia. Making differential diagnosis is often complicated by overlapping signs and symptoms of dependence and diagnostic entities, e.g. anxiety is a prominent feature of drug withdrawal. A further complication is with shared or reciprocal causal processes, e.g. a mild disorder of mood leads to some drug use which eventually leads to an exacerbation of the mood disturbance, to further drug use, dependence and severe mood disturbance.

The EMCDDA state that in this context, comorbidity, "refers to the temporal co-existence of two or more psychiatric or personality disorders, one of which is problematic substance use" (EMCDDA, 2004:94).

Weaver *et al.* (2003) argue that the term dual diagnosis is imprecise as it excludes those who have not been formally diagnosed or are receiving treatment for both conditions.

In recent years dual diagnosis appears to have acquired a very narrow/specific meaning of the co-occurrence of mental health disorders (particularly psychotic disorders such as schizophrenia) and substance abuse disorders (alcohol and/or drug dependence or abuse). Another version is the presence of a substance abuse or chemical dependency diagnosis with a co-existing psychiatric disorder. It can of course be used more widely to refer to the co-occurrence of behavioural health diagnosis and a medical diagnosis or disability; or, more simply, two conditions, diseases or syndromes existing simultaneously.

Dual disorders have been defined as the co-occurrence (comorbidity) of two conditions. Both of these conditions must have some clinical significance to the affected individual, i.e. they must both be associated with some impairment of functioning. Co-occurring disorders appear to be becoming a

common term for dual diagnosis or co-occurring substance misuse disorders and psychiatric or emotional illnesses.

A lot of terms have been used interchangeably that appear to have the same connotations as dual diagnosis - comorbidity, co-occurring illnesses, concurrent disorders, comorbid disorders, dual disorders. The absence of a standard definition makes it difficult to compare research studies and for practitioners to communicate clearly with one another and thus to agree on how these problems should be treated.

Although the term implies homogeneity, dual diagnosis covers a varied and complex range of issues. Even though the term comorbidity is more accurate than dual diagnosis, it could be validly argued that the term 'multi-morbidity' may be more appropriately applied to those suffering from psychiatric/personality disorders and using illicit/prescribed drugs, since many such individuals also suffer from somatic illnesses (e.g. HIV/AIDS, hepatitis) and experience social disorders (family problems, unemployment, imprisonment or homelessness) (Lehman *et al.*, 1989; EMCDDA, 2004:94). Although Batki (1990) used the term 'triple diagnosis' over 15 years ago in respect of co-occurring substance abuse, psychiatric disorders and HIV/AIDS, it is only relatively recently that the term has become more 'main-stream' (see, for example, Douaihy *et al.*, 2003; MacPhee and Douaihy, 2005).

As well as comorbidity or dual diagnosis being a diagnostic entity, the term may be treated as a generic index of complexity (Rassool, 2002:134). It is not merely a label but something which can and does determine service provision (Todd *et al.*, 2004).

Explanations of and models for comorbidity

Four possible causal mechanisms for comorbidity have been examined (Wittchen, 1996c):

- One particular disorder A may predispose a person to another disorder B, which in turn might influence the likelihood of developing a third disorder. For example, one hypothesis is that long-standing anxiety disorders predispose a person to the development of depressive disorders and substance use disorders.
- Either disorder may predispose to the development of the other.
- One key antecedent factor is specific for different disorders.
- One or more distinct antecedent factors are active, such as X and Y causing A, and X and Z causing B.

Psychiatric disorders and substance abuse

Four categories of dual diagnosis involving substance misuse have been suggested by Krausz (1996):

- A primary diagnosis of a mental illness, with a subsequent (dual) diagnosis of substance misuse that adversely affects mental health.

- A primary diagnosis of drug dependence with psychiatric complications leading to mental illness.
- Concurrent diagnosis of substance misuse and psychiatric disorders.
- A dual diagnosis of substance misuse and mood disorder, both resulting from an underlying traumatic experience, for example post-traumatic stress disorder.

Central to these explanations is the distinction between 'primary' and 'secondary' in terms of cause and effect. However, the distinction has also been made in terms of temporal appearance or age at lifetime onset (Feighner *et al.*, 1972). Whilst such a distinction has face validity in suggesting that the first temporal disorder is independent of subsequent disorders, it does not clarify whether the secondary disorder is independent of the first or how the disorders may be inter-related (Samet *et al.*, 2004). However, it is widely recognised that certain psychiatric disorders have characteristic ages of onset and can thus be distinguished temporally as primary or secondary. For example, attention deficit disorder (ADD) and conduct disorder begin in childhood; alcohol and drug abuse in early to mid-adolescence; and anxiety, mood and psychotic disorders in late adolescence and adulthood.

A range of theories and models have been put forward to explain why patients who are severely mentally ill are particularly vulnerable to the misuse of psychoactive substances. Mueser *et al.* (1998) have summarised these as (a) three main types of psychosocial risk factor and (b) super-sensitivity models. These are briefly outlined below.

- Self-medication

This occurs to the motivation of individuals who seek a specific substance to relieve a particular set of symptoms. Khantzian (1985, 1987) suggested that individuals adaptively misuse psychoactive substances in order to handle painful affective states and related psychiatric disorders which may then predispose them to addictive behaviours. It is suggested that specific psychoactive substances are chosen selectively for their unique properties, rather than at random, by potential addicts. The results of a number of clinical studies appear to have given support to this hypothesis (Dorus and Senay, 1980; Rounsaville *et al.*, 1982; Khantzian and Treece, 1985). However, the results of other research have made substantial holes in the argument. Specific symptoms of particular psychiatric disorders are not alleviated by a specific substance (Dixon *et al.*, 1990; Noordsy *et al.*, 1991). Diagnosis is not related to the selection of specific psychoactive substances (Regier *et al.*, 1990). Selection of a specific psychoactive substance is influenced by availability (Mueser *et al.*, 1992). Severely mentally ill patients use many psychoactive substances (Chen *et al.*, 1992). Furthermore, there is no evidence of self-medication being a necessary reinforcer of continued drug use (Castaneda *et al.*, 1994).

- Alleviation of dysphoria

This model has more credence than the previous one. Birchwood *et al.* (1993) suggest that severely mentally ill patients are liable to experiencing

bad feelings (dysphoria) and this makes them open to the use of psychoactive substances. The initial rationale for using psychoactive substances (especially alcohol and drugs) is for the relief of such bad feelings and to feel good (Carey and Carey, 1995; Pristach and Smith, 1996; Addington and Duchak, 1997; Leshner, 1998).

- Multiple risk factors

There are additional underlying risk factors which may make severely mentally ill individuals susceptible to the use of psychoactive substances. These factors include: association with drug subcultures; availability of illicit psychoactive substances; educational failure; lack of adult role responsibility; lack of interpersonal skills; poor cognitive skills; and social isolation (Anthony and Helzer, 1991; Berman and Noble, 1993; Jones *et al.*, 1994). The rationale for using psychoactive substances has been identified as being related to these factors (Dixon *et al.*, 1990; Noordsy *et al.*, 1991).

- Super-sensitivity model

The basis of this theory is explained as follows: "psychobiological vulnerability, determined by a combination of genetic and environmental events, interacts with environmental stress to either precipitate the onset of a psychiatric disorder or to trigger relapse" (Mueser *et al.*, 1998:723). The argument goes thus, the sensitivity of psychoactive substances (increased vulnerability) may cause patients with severe mental illness to be more likely to experience negative consequences from using relatively small amounts of psychoactive substances (Rassool, 2002:28). There is some research to support this model (Drake *et al.*, 1989, 1990; Corse *et al.*, 1995; Lieberman *et al.*, 1987).

Is comorbidity an artefact?

Several reasons have been proposed for explaining comorbidity as an artefact.

- There is no systematic relationship between disorders.
- Comorbidity is mainly an artefact of certain studies, assessment methods, and regions.
- Comorbidity is an artefact of help-seeking patients.

However, epidemiological studies and sophisticated statistical methods such as the odds ratio have demonstrated that it is a stable phenomenon across settings and studies. The studies also provide findings specific to certain types of disorders that could not be explained by chance (Weissman *et al.*, 1993, 1994, 1996; Merikangas *et al.*, 1996).

Presentation of comorbidity

There is a need to distinguish between psychiatric symptoms and disorders so that an accurate diagnosis is obtained. Crome (1999) has suggested the following ways in which comorbidity may be manifested:

- Substance use (even one dose) may lead to psychiatric symptoms or syndromes.
- Harmful use may produce psychiatric symptoms.
- Dependence may produce psychological symptoms.
- Intoxication from substances may produce psychological symptoms.
- Withdrawal from substances may produce psychological symptoms.
- Withdrawal from substances may lead to psychiatric syndromes.
- Substance use may exacerbate pre-existing psychiatric disorder(s).
- Psychological morbidity not amounting to a 'disorder' may precipitate substance abuse.
- Primary psychiatric disorder may lead to substance use disorder.
- Primary psychiatric disorder may precipitate substance use disorder which may, in turn, lead to psychiatric syndromes.

The DSM-IV presents five axes that can be used to demonstrate the complexities of comorbidity. The five axes are described as follows:

- Axis I - Clinical syndromes, developmental disorders and other conditions of clinical relevance.
- Axis II - Includes personality disorders and traits, and learning disabilities.
- Axis III - Relates to general medical conditions and physical symptoms associated with the current psychiatric condition.
- Axis IV - Psychosocial and environmental problems.
- Axis V - Global Assessment of Functioning (GAF).

The majority of psychiatric disorder and substance use disorder (SUD) comorbidities encountered by practitioners belong to axes I and II. Oyefeso (2002) describes the main forms of such co-occurrences. For Axis I comorbidity he lists (a) SUD and schizophrenia, (b) SUD and mood disorders; and (c) SUD and anxiety disorders. The two main forms for combined Axis I and II comorbidity are (a) antisocial personality disorder and (b) borderline personality disorder.

Oyefeso (2002) notes that the overlap in symptomatology between SUD and other psychiatric disorders means that there is a need for careful assessment and diagnostic efficiency. This needs to happen at two levels: first, the practitioner needs to be aware of the complicated interplay between Axis I disorders in general with their more elaborate presentations and Axis II which are more chronic in form; second, the conceptualisation of comorbidity has to be improved through an exploration of the accuracy of diagnoses made and the chronology of the diagnosed disorders. In order to achieve this goal three criteria need to be met: diagnostic stability; developmental course; and family history.

Measuring psychiatric disorders

Several reasons have been put forward as to why we need a classification system in psychopathology:

- Before a disorder can be treated it has to be isolated and labelled so that theories can be formulated about it and treatment devised.
- Classification enables scientists to communicate accurately and reliably. Describing an item as belonging to a specific category is a short-hand way of communicating a great deal of information.
- It can provide a basis for psychiatric and psychological services.

What type of classification system or taxonomy is best in medicine?

In a categorical system the definitions of illnesses are often created by a group of experts who combine their experience to construct definitions based on the typical symptoms of the various disorders. Definitions should, ideally, be mutually exclusive. However, in the real world a patient can suffer from more than one illness. Therefore, sometimes a categorical system actually defines hierarchies of illnesses.

An empirical approach is normally used for the construction of a dimensional classification system. Statistical techniques are employed to determine which symptoms cluster together, and descriptive labels are then applied to the various clusters for convenience. Therefore, patients do not have to be shoe-horned or forced to fit into a single category. Dimensional taxonomies can be more complex than a categorical classification since an individual patient can receive scores on a number of different symptom scales - a syndrome profile rather than a single diagnosis (Hasin *et al.*, 2003).

The advantages and disadvantages of these approaches to classification in the field of medicine are summarised in Table 1.1.

Kihlstrom (2002) argues that it is not necessarily a bad thing that the medical model has been diffused amongst discussions regarding mental illness. What he is concerned about, however, is the way in which misunderstandings and misinterpretations of it have been generated and sustained over the years. One instance he quotes is from Gleitman's *Psychology* where the medical model is described as

"a particular version of the pathology model [which assumes that symptoms are produced by an underlying pathology, and that the main goal of treatment is to discover and remove this pathology], that assumes ... that the underlying pathology is organic" (Gleitman, 1995).

Table 1.1: Advantages and disadvantages of categorical and dimensional classification systems in medicine

| | Categorical | Dimensional |
|---------------|---|---|
| Advantages | <ul style="list-style-type: none"> • Clinical convenience - a single diagnosis facilitates communication, prognosis and treatment. • Since they are based on clinical experience they have face validity and are easily applied in clinical settings. • Has a long clinical tradition and has assisted in the search for aetiology and thus forms the basis for classification. | <ul style="list-style-type: none"> • Facilitates the use of increasing knowledge of aetiology derived from new empirical and scientific techniques. • Not solely based on symptoms. • Can look at several dimensions at once and thus be more flexible. |
| Disadvantages | <ul style="list-style-type: none"> • Not empirically grounded but based on expert opinions, historical precedent, and possibly political considerations. • Usually heterogeneous with regard to aetiology. • Diagnostic reliability is heavily dependent on the reliability of certain key items. • Many patients lie at definitional boundaries, and there is inter-patient variability. | <ul style="list-style-type: none"> • More difficult for clinicians to communicate easily in terms of syndrome scale scores rather than a single diagnostic label. • Busy practitioners might convert such a scale to a threshold (i.e. diagnostic category) below which clinical attention or funding would not be applied. |

Source: Derived from Hasin *et al.* (2003)

The medical model of psychology began to emerge in the nineteenth century. It assumes that psychopathology is the product of natural causes that can be identified by the application of empirical science. This model, rather than asserting that psychopathology comes out of an abnormal biological condition and thus can only be treated with drugs or surgery, is centred on the rules regulating two primary social roles - doctor and patient (Kihlstrom, 2002).

There are different versions of this model derived from distinctions between these roles. The clinical medical model has the cure of disease in the individual as its goal, and the relationship is one of doctor and patient. The goal of the public health medical model is the cure of illnesses that cannot be controlled at an individual level, the prevention of disease in a population.

The roles become those of public health official and citizen. The scientific medical model is different again. Here the focus is on the acquisition of scientific knowledge about the nature of disease rather than prevention or cure. The doctor investigates subjects rather than patients.

Kraepelin unsuccessfully tried to base diagnosis on more than presenting symptoms such as classification by pathological anatomy or aetiology but ended up falling back on course and prognosis. This approach has continued to be used because of the great difficulties in deriving information on organic pathology. So, for example, although the first edition of the DSM may have been based or grounded in psychoanalysis and psychosocial concepts, diagnosis was founded on lists of symptoms and signs.

Categorical or dimensional approaches?

Alternative approaches to the medical model of psychopathology have been proposed by (a) those seeking to put diagnosis on a firmer empirical base and (b) by those wishing to substitute a dimensional frame-work for a categorical structure for the diagnostic nosology (see, for example, Blashfield, 1985). The empirical lobby argues that a more valid set of diagnostic categories will be generated by the application of multivariate statistical techniques such as factor analysis and cluster analysis. The result may be a nosology akin to fuzzy sets (like DSM-III and DSM-IV) but grounded in empirical data.

Lehman *et al.* (1989) argue that such an approach would identify homogeneous clusters of patients, each cluster having a common pattern of symptoms and behaviours. A cluster might contain patients who exhibit symptoms of alcohol use, cocaine use, cannabis use, depression and anxiety. Rather than giving such patients multiple diagnoses, they would be designed as members of a group of patients with similar problems. The clinical utility of this clustering approach could then be examined in prospective studies of outcome and treatment.

Proponents of a dimensional approach (e.g. Watson *et al.*, 1994; Clark *et al.*, 1995) contend that categorical approaches to psychopathology are challenged/compromised by problems such as comorbidity and heterogeneity. Goldberg (1996) argues that dimensional models are the most economical way of "trying to account for variations between the myriad different sets of symptoms offered by patients", and "offer considerable advantages to those who wish to attempt to relate continuously distributed social variables to clinical variables." One of the dangers with categorical models, in his view, is that those who use them come to believe in them: "Instead of realising that a categorical diagnosis is both provisional and hypothetical, the true believer reifies it."

Other criticisms of approaches such as DSM-IV and ICD-10 are that (a) there is frequent use in DSM-IV of a 'not otherwise specified' category and (b) there is a forced separation between some Axis I diagnoses and their cognate personality disorders on Axis II. Axis I - clinical disorders - is split into 14 categories including one for substance-related disorders, which in turn

comprises four items (alcohol, caffeine, drugs and nicotine). However, the American Psychological Association recommends in DSM-IV that clinicians use a multi-axial assessment system.

Kihlstrom (2002) sees these approaches as only alternative ways of handling information about symptoms rather than moving forward to diagnosis based on underlying pathology. This approach to diagnosis should not be based on underlying pathologies of anatomy and physiology but of "underlying *mental* abnormalities - disorders of cognitive, emotional, and motivational function that underlie the abnormalities of experience, thought, and action that present themselves as palpable signs and symptoms of mental illness." According to Kihlstrom (2002), they argue for testing (in the psychological laboratory) for differential psychological deficits to help construct a new nosology founded on psychopathological findings. This will place diagnostic concepts and practices on a firmer scientific base.

Measuring comorbidity with the DSM

Often comorbidity is referred to in terms of the frameworks provided by the Diagnostic and Statistical Manual (DSM) developed by the American Psychiatric Association and the World Health Organisation's International Classification of Diseases (ICD). For example, most national population surveys of mental health use these diagnostic criteria.

When the first edition of the DSM was published in 1952 it was just a short pamphlet. This and the second edition (published in 1968) both gave only listings of diagnostic labels, coding numbers and brief descriptions of the major illnesses. There was little guidance on how diagnoses were to be made - one reason why diagnosis was so unreliable. However DSM-II also expanded the diagnostic options in a few areas, including substance use.

Subsequent editions of the DSM and instruments such as Research Diagnostic Criteria (Spitzer *et al.*, 1975) and the Schedule for Affective Disorders and Schizophrenia (SAPS) (Endicott and Spitzer, 1978) are examples of the neo-Kraepelinian movement. They arguably made diagnosis more reliable, if not more valid (Kihlstrom, 2002).

There was a change in the structure of psychiatric nosology between DSM-II and DSM-III. Prior to DSM-III psychiatric diagnoses were construed or explained as proper sets. That is, summaries of instances (syndromes) which shared a set of defining features (symptoms) which in turn were singly necessary and jointly sufficient to identify an entity as an example of the category. Thus diagnoses were defined by clusters of symptoms rather than by aetiology. Furthermore, patterns and durations of symptoms were specified, criteria were provided to distinguish between different disorders, and listed features that excluded the presence of a disorder. In this way illness boundaries were defined, as well as a hierarchy of diagnoses for patients who met multiple definitions.

However, many patients did not fit into these traditional diagnostic categories because either they did not present with all the defining features of a particular instance (syndrome) or presented with characteristics of two or more contrasting instances (syndromes).

During the 1970s and early 1980s there was a wide recognition of a need for precise diagnostic definitions; other models began to be proposed. One such was the probabilistic or prototype model (Smith and Medin, 1981). In this approach, categories are seen as fuzzy sets, lacking sharp boundaries between them. The category elements (members) are united by 'family resemblance' rather than by a package/group of defining features. No feature is singly necessary, and no set of features is jointly sufficient, to define a category. Categories are represented by prototypes which possess many features characteristic of the target category and few features characteristic of contrasting categories. This approach influenced both DSM-III and DSM-IV.

Whilst the RDC, DSM-III and DSM-III-R differentiated between psychiatric symptoms on the basis of 'organic' and 'non-organic' aetiology, specific criteria for distinguishing between such disorders were not provided, leaving the process of distinguishing them unclear. DSM-III and DSM-III-R failed to respond in a meaningful way to increasing alcohol and drug abuse amongst patients with psychiatric disorders. A psychiatric syndrome was considered to be 'non-organic' if 'it cannot be established that an organic factor initiated and maintained the disturbance' (APA, 1987). This lack of specific criteria left room for discrepant approaches (Samet *et al.*, 2004).

DSM-III (published in 1980) found rapid acceptance not only in the USA but internationally. It avoided the pitfall of speculative causal inferences concerning the aetiology of mental disorders, but did describe causal factors for specific disorders whose aetiology is known. Substance use disorders went through a major restructuring in the 1987 revision (DSM-III-R). This reorganisation was based on a new theoretical conceptualisation of substance dependence. The dependence criteria in this version and DSM-IV reflected a concept of dependence combining both physiological and psychological processes.

Both DSM-IV and DSM-IV-R provided more specific guidelines for making a differentiation between 'primary' and substance-induced psychiatric disorders, using the 'expected effects' of intoxication and withdrawal. A 'primary' disorder is diagnosed if 'the symptoms are not due to the direct physiological effects of a substance'. There are four conditions that have to be met by a psychiatric episode that co-occurs with substance intoxication or withdrawal for which a primary classification can be considered appropriate: (1) symptoms 'are substantially in excess of what would be expected given the type of or amount of the substance used or the duration of use'; (2) a history of non-substance-related episodes; (3) the onset of symptoms precedes the onset of the substance use; and (4) the symptoms persist for a substantial period of time after the cessation of intoxication or acute withdrawal (APA, 2000: 342, 409). If neither of these two criteria (i.e. 'primary' or 'substance-induced') are met, the syndrome is considered to be intoxication or withdrawal effects of alcohol or drug.

The changes in approach introduced by DSM-IV and DSM-IV-TR mean that a diagnosis can be made after the onset of a substance-use disorder if it occurs after a period of abstinence. Moreover, the DM framework now recognises that psychiatric syndromes can have clinical importance even though co-presenting with heavy alcohol or drug use. DSM-IV-TR assists in training and diagnosis by the inclusion of a table of diagnoses associated with different classes of substances (APA, 2000:193).

The DSM-IV approach to measuring psychiatric disorders

There are some problems evident with the way in which DSM-IV deals with comorbidity. Pathological behaviour can be diagnosed on the basis of symptoms alone. However, symptoms are not necessarily indicative of an underlying disease; they can be exhibited by different diseases. Disorders have separate aetiologies and distinct clinically significant behavioural or psychological syndromes. Patients rarely exhibit symptoms from only one disorder, suggesting that disorders are not discrete.

There are implications for the reliability of DSM-IV. A clinician can diagnose a patient as suffering from a specific disorder by observing symptoms and see if they fit the necessary and sufficient conditions for that disorder. But, most disorders cannot meet this condition as symptoms vary too much between individuals. There should be very little dispute between psychiatrists as to the disorder which a patient is diagnosed as having. In practice, psychiatrists often disagree upon diagnosis. Mental disorder is not sharply discontinuous from normality.

The validity of DSM-IV can also be challenged. The classification of disorders should serve a fundamental use in selection of the type of treatment for a patient. Many treatments are effective across a range of disorders, and none are invariably effective in one condition. Thus the functional aspects of validity are not well supported. Since one treatment does not work on one disorder alone, it follows that there must be a degree of poor construct validity and systematic import with the classificatory concept.

A number of studies have shown excellent test-retest reliability for alcohol dependence under DSM-IV but much lower reliability for abuse (Hasin *et al.*, 2003). When abuse was considered independently from dependence, rather than as a residual category, abuse reliability improved. This suggests that the hierarchical relationship to dependence rather than the criteria themselves contributed to the poor reliability of DSM-IV alcohol abuse. The Kraepelinian model regards mental disorders as mutually exclusive categorical disease entities that are arranged hierarchically. Through the use of exclusion criteria an individual receives only one psychiatric diagnosis. This approach was a major revision of the DSM and the ICD, and thus on contemporary psychiatric classification. Studies also show that dependence is likely to remain chronic whilst abuse is likely to remit and likely to develop into dependence. These findings support the validity of dependence and its distinction from abuse in DSM-IV.

The ICD approach to measuring psychiatric disorders

Under ICD-9 (WHO, 1977) there are 26 codes for substance misuse disorders and 369 psychiatric diagnoses. The Conference on the ninth revision of the ICD recommended

"that the condition to be selected for single-cause analysis for health-care records should be the main condition treated or investigated during the relevant episode of hospital or other care. If no diagnosis was made, the main symptom or problem should be selected instead. ...

It is desirable that, in addition to the selection of a single cause for tabulation purposes, multiple condition coding and analysis should be attempted wherever possible, particularly for data relating to episodes of health by hospitals (inpatient or outpatient), health clinics and family practitioners. For certain other types of data, such as from health examination surveys, multiple cause analysis may be the only satisfactory method" (p. xxi).

"The Conference noted with interest the extended use of multiple condition coding and analysis in a number of countries with a variety of ends in view... The Conference also noted the value of a store of multiple-coded national data on mortality and morbidity" (p. xxii).

"...developments seemed to indicate some desire for greater flexibility and to raise doubts as to whether a single multipurpose classification was any longer practicable. It was felt that multi-axial classification often destroyed the ability to retrieve disease terms. Allocating a unique code to a disease or term might be one way of overcoming problems caused by changes in classification" (p. xxii).

The structure of the Tenth Revision was another question for urgent decision: should the present uni-axial system be retained or should there be a move to a multi-dimensional approach; should the coding and classification elements be separated so that the former could remain constant while the latter could be revised at shorter intervals than at present?" (p. xxiii).

The introduction to Chapter V Mental Disorders refers to the need to include a glossary "because of the special problems posed for psychiatrists by the relative lack of independent laboratory information upon which to base their diagnoses. The diagnosis of many of the most important mental disorders still relies largely upon descriptions of abnormal experience and behaviour, and without some guidance in the form of a glossary that can serve as a common frame of reference, psychiatric communication easily becomes unsatisfactory at both clinical and statistical levels." It goes on to state that "Many well-known terms have different meanings in current use, and it is important for the user to use the glossary descriptions and not merely the category titles when searching for the best fit for the condition he is trying to code. This is particularly important if a separate national glossary also exists." It recommends the use of additional codes whenever possible because the nature of many psychiatric conditions necessitates two or more codes to describe the condition and the associated or causal factors (p. 177).

Measuring comorbidity using the ICD

The relevant disorders listed and defined in Chapter 5 of ICD-9 are: drug psychoses (292 with 5 separate sub-categories); alcohol dependence syndrome (303); drug dependence (304 with 10 sub-categories); and nondependent abuse of drugs - including tobacco (305 with 10 sub-categories).

The description for alcohol dependence syndrome states that if a person is dependent on alcohol and other drugs, the appropriate 304 coding should be made. If dependence is associated with alcoholic psychosis or with physical complications, both should be coded. The description for nondependent abuse of drugs states that when drug abuse is secondary to a psychiatric disorder, the disorder should be coded.

In ICD-10 (WHO, 1992:320-4) under Chapter V "Mental and behavioural disorders (F00-F99)" are set out the criteria for those due to psychoactive substance use (F10-F19). These three-character categories are allocated to specific substances or types of substances, with a fourth character specifying the clinical state, e.g. acute toxication, harmful use, dependence syndrome, withdrawal state, etc. This approach reflects the recommendation by the tenth Conference that additional guidance on the recording and coding of morbidity should be given.

The ICD-10 Diagnostic Research Criteria (WHO, 1993) provide specific criteria to differentiate between primary disorders and those resulting from psychoactive substance use - but only for psychotic disorders. They also exclude psychotic episodes attributed to psychoactive substance use from a primary classification; and thus are similar to DSM-IV in this respect.

Psychotic disorders can be attributed under the ICD-10 diagnostic criteria to psychoactive substance use in three situations: (1) the onset of symptoms must occur during or within two weeks of substance use; (2) the psychotic symptoms must last for more than two days; and (3) the duration of the disorder must not exceed 6 months. ICD-10 does not therefore appear to cater for some events such as flash-backs which may have been the result of substance-taking some years previously, e.g. LSD. (A psychotic disorder attributed to use of psychoactive substances can be primarily depressive or manic.)

Under ICD-10 the term 'organic mental disorder' by definition excludes disorders related to the use of alcohol or other psychoactive substances. Organic mood and delusional disorders cannot be used under ICD-10 to diagnose episodes co-occurring with heavy use of psychoactive substances. This classification system does not, therefore, include the DSM-IV concept of symptoms that exceed the expected effects of intoxication and withdrawal.

The Instruction manual (vol 2 pp 79-81) states that in terms of comorbidity, three or more of the following must have been experienced or exhibited at some time during the previous year.

- Difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use.
- A strong desire or sense of compulsion to take the substance.
- Progressive neglect of alternative pleasure or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects.
- Persisting with substance use despite clear evidence of overtly harmful consequences, depressive mood states consequent to heavy use, or drug related impairment of cognitive functioning.
- Evidence of tolerance, such that increased doses of the psychoactive substance are required in order to achieve effects originally produced by lower doses.
- A physiological withdrawal state when substance use has ceased or been reduced, as evidenced by the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms.

Some writers state that these events must have occurred together for at least one month, or repeatedly within a 12-month period.

Difficulties in applying the DSM and the ICD

A study conducted by Robins and Regier (1991) used a pencil and paper approach to interviewing people when they set out to estimate the prevalence of DSM-III disorders in the US population. This meant that the subjects were assigned multiple DSM-III diagnoses rather than being constrained to a single diagnosis. The results showed that there were many individuals with one mental disorder who had one or more additional disorders. Other comorbidity studies have since confirmed these conclusions (see, for example, Kessler *et al.*, 1994).

Some critics of classification systems such as the DSM and the ICD contend that they do not possess sharp distinctions between the distribution of symptoms for most mental disorders. This is even true of psychoses where many critics would accept that a categorical approach to disorders has the greatest relevance. Andrews *et al.* (1999), for example, argue that there is no apparent distinction in the range of symptoms in the general population for affective, anxiety, personality or substance use disorders.

In practice, differential diagnoses of anxiety, depression and psychosis frequently turn on an interpretation of the term 'in excess' of the 'expected' effects of substance use (including clients with chronic substance use with an early age of onset). These 'expected' effects are not defined clearly by either DSM-IV or ICD-10 criteria and are therefore left to the judgements of clinicians (Samet *et al.*, 2004).

The WHO (1978) recognises the difficulties inherent in adding a new illness to an already established classification such as the ICD. It has to be carefully placed in correct relationship to other similar conditions, depending on the criteria being used in that particular classification. Each section in

classifications designed primarily for statistical purposes, such as the ICD, are initially allocated a fixed number of categories. When such a classification is first set up all the terms in the existing nomenclature or taxonomy have to be fitted into these categories. Often it is not possible to leave spaces for future changes or additions. Thus, the insertion of a new term may necessitate the deletion of other terms or the rearrangement of already accepted sections of the classification. As a consequence, a fairly conservative approach has to be adopted to proposed changes in a statistical classification (WHO, 1978:9).

The rigid application of criteria may mean that some individuals will not be regarded as comorbid and thus not benefit from treatment. For example, many individuals with mental disorders and low level or occasional substance use may not fulfil standard criteria for substance misuse or dependence, and thus miss out on interventions aimed at reducing substance use (Franey and Quirk, 1996). With this in mind, Smith and Hucker (1993) suggest that standard definitions and diagnostic criteria for substance misuse may be inappropriate as their use will under-estimate the extent of the problem. A more conservative view has been expressed by other researchers who argue that the use of standard definitions may over-estimate the problem. Wittchen (1994), for example, reported that standardised instruments based on the DSM and ICD can generate two or three times the number of diagnoses determined from an assessment by a clinician.

Alternative classification systems

Any new system of classification will need to meet the needs and expectations of both the research and practitioner communities. According to Hasin *et al.* (2003) it should:

- Include diagnostic criteria informed by findings from basic research, clinical/treatment research, epidemiology, and cultural research;
- Incorporate matrices of dimensionality and sub-typing; and
- Utilise new nosological and classificatory schemes.

Other factors that would have to be borne in mind, in particular with regard to substance misuse (Hasin *et al.*, 2003), include

- Diagnostic criteria for substance use disorders are never likely to be perfect.
- Substance use criteria must be relevant to numerous distinct categories of substances which have different characteristics.
- Criteria must be clinically useful, i.e. easy to remember, relatively short and easy to implement.
- Criteria must be capable of being used in different cultural settings, e.g. age groups, genders, ethnic groups, etc.
- Definitions must be used by researchers and clinicians that make it possible to operationalise the generic criteria.
- Any new approach must have clear, demonstrable advantages over the set of historic criteria that outweigh any problems associated with the new ones.

Many incompatibilities still exist between the DSM and ICD. There have been calls for a research agenda to identify and reconcile differences so as to allow for a single, unified DSM-V/ICD-11 classification system (First *et al.*, no date). This would promote uniformity of approach to all illnesses, including substance use disorders.

Conclusions

Why is defining, measuring and assessing comorbidity important? There are several reasons as to why comorbidity is an important issue. These reasons are briefly set out below:

It is clear from studies in a number of countries that far from being an exception with regard to mental disorders/problems comorbidity is usually the rule (Van Praag, 1996; Merikangas *et al.*, 1998; Andrews *et al.*, 1999). In the UK context, Smith and Hucker (1993) propose that "given the extent of the problem, substance abuse among severely mentally ill patients should be considered usual rather than exceptional.

Not only is comorbidity fairly common, it appears to be increasing in primary care. This has important implications for resource allocation, service organisation, and training.

Lack of familiarity with the DSM, ICD or other criteria for classifying mental disorders and substance abuse disorders on the part of the clinician at the initial assessment of a patient may lead to premature closure about the presence of either type of problem. Another pitfall to avoid in the assessment stage is to presume the primacy of either the psychiatric or the substance abuse disorder. Treatment should be concurrent for both disorders. All syndromes present should be identified and treated.

Oyefeso (2002) points out that it is increasingly becoming customary for substance misuse and mental health professionals to define the dominance of a disorder in terms of the first treatment episode or agency of first presentation, substance misuse service or mental health team. This further reinforces the need for clear and unambiguous classification methods that share a broad consensus of support and application.

Patients experiencing transient psychiatric symptoms clearly associated with intoxication or withdrawal would not receive a dual diagnosis, whereas those with a well-documented history of both a major mental illness and substance dependence would be clearly given a dual diagnosis. Where decision-making becomes more problematic for the clinician is when they have to consider less definitive or more chronic levels of these two types of disorder (Lehman *et al.* 1989). When assessing and classifying what long-term treatment(s) may be relevant during the period of maintenance or rehabilitation, a key question that has to be answered is whether a patient's disorders have a hierarchical structure and what factors contribute to the long-term risk of re-occurrence.

Some psychotic disorders create needs on relatives, carers and mental health professionals for urgent treatment and assistance. The problems in getting such help can be aggravated by services for substance use and mental illness being administratively separate, and often having markedly different treatment philosophies and cultures/approaches.

The characteristics of a disorder under examination may be mistaken for those that are caused by an ignored comorbid condition if the possibility of comorbidity is not taken into account when studying individual mental disorders (Kessler, 1995). Therefore, it is essential to have a considered assessment process that ensures patients' needs are accurately identified and prevents inappropriate treatment responses (Franey and Quirk, 1996). A detailed psychiatric and substance use history with corroborative information from a client's relations and care staff and from laboratory tests is the approach recommended by Crome (1996).

Important occasions for prevention may be provided through understanding why different disorders co-occur. Toneatto *et al.* (2003) argue that there is a need for a better characterisation of the phenomenological heterogeneity of psychiatric comorbidity among treatment-seeking substance abusers. Such knowledge may be significant, it is suggested, in the assessment of substance abuse and psychiatric symptoms, planning of treatment, evaluating prognosis, and preventing relapse.

There is often a poorer treatment response from individuals with comorbid mental disorders and such persons experience a worse course of illness over time (Kessler, 1995). They generate larger social costs because they are more impaired and experience increased social disability. Those who suffer from both substance use and mental disorders have a poorer outcome than those with a single disorder.

There are important implications for treatment when comorbidity is present. The treatment of one symptom may alleviate those of another condition. Having one disorder may worsen the symptoms and course of the other disorder even where there is no causal relationship between the two, e.g. alcohol dependence and an affective disorder.

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Chapter 2 An epidemiological perspective of psychiatric comorbidity and substance misuse: the UK experience/example

I B Crome

Terminology: What does the term ‘comorbidity’ mean?

Comorbidity is the occurrence of two or more conditions over a specified period of time, which may encompass both medical and psychological disorders. For the purposes of this monograph the term “comorbidity” is used to describe the co-occurrence of substance use, misuse, harmful use or dependent use and psychological symptoms or syndromes. Physical disorders are *not* being covered, but it is well recognised that they often contribute to ‘comorbidity’.

Comorbidity is therefore the co-occurrence of two or more psychological disorders, for example schizophrenia and alcohol dependence or depressive disorder and nicotine use.

The terms ‘comorbidity’ and ‘dual diagnosis’ are used interchangeably, although it is acknowledged that these terms may fail to adequately describe - and may even exclude – the multiple morbidities in the heterogeneous ‘real world’ of clinical practice.

Some other terms used interchangeably by other authors include:

- Mentally ill chemical abuser.
- Chemically addicted mentally ill (CAMI).
- Co-occurring addictive and mental disorders (COAMD).
- Comorbidity of substance misuse and mental disorder.
- Co-existing problems of mental health and substance misuse.

Interrelationships derived from clinical experience are complex. For example, a study may incorporate a number of substances and psychiatric disorders at any one time. Comorbidity can present in the following ways (Crome, 1999b):

- Substance use may lead to psychiatric syndromes or symptoms.
- Harmful use may produce psychiatric symptoms.
- Dependence may produce psychological symptoms.
- Intoxication may produce psychological symptoms.
- Withdrawal may produce psychological symptoms.
- Withdrawal may lead to psychiatric syndromes.
- Substance use may exacerbate pre-existing psychiatric disorders.
- Psychological morbidity not amounting to a ‘disorder’ may precipitate substance use.
- Primary psychiatric disorder may lead to substance use disorder.
- Primary psychiatric disorder may precipitate substance use disorder, which may, in turn, lead to psychiatric syndromes.

Of course, substance misusers may be using more than one substance and this complicates matters further.

It should be noted that we know very little about the epidemiology of these relationships at this stage. This underlines the fact that there are many different types of dual diagnosis depending on the time sequence and interactions between the two conditions. Even a single dose of a drug may lead to a psychiatric disorder.

Why is there concern?

In comparison to patients who have a single diagnosis, those who present with comorbidity may have a variety of exacerbated problems. For example, it is reported that they have an increased likelihood of suicide (National Inquiry into Suicide and Homicide by People with Mental Illness, 2001). In addition, they suffer from more severe mental health problems. Indeed, inpatient admission rates amongst comorbid patients in Inner London were double those of patients with psychosis alone (Menezes *et al.*, 1996). Social insecurity, such as homelessness and unstable housing, is another feature. There is also reported increased risk of victimisation and being violent, more contact with the criminal justice system, and history of childhood abuse.

Comorbid patients may be less likely to be compliant with medication and other interventions and thus more likely to slip through care, though they may have an increased use of services. In the largest longitudinal follow up studies, patients with substance-induced mental disorders at baseline were more likely to have been rehospitalised than the single diagnosis group and had the most severe alcohol and drug related impairment (BootsMiller *et al.*, 1998). Furthermore, these patients may be at increased risk of HIV infection and other physical problems (Rosenberg *et al.*, 2001). These poor social outcomes further impact on carers and the family, and on the wider community (Kivlahan *et al.*, 1991).

However, since there are effective interventions for both substance problems and psychiatric conditions, the need for identification of comorbid patients is an important consideration (Barrowclough *et al.*, 2001; Berglund *et al.*, 2003; Slattery *et al.*, 2003; Lingford-Hughes *et al.*, 2004).

Historical background to the UK experience

To set the UK experience in context, clinicians had for some time recognised that patients presenting with substance misuse had psychiatric conditions closely preceding their substance misuse, following on from it, or indeed in conjunction with it (Glass and Jackson, 1988).

Similarly, in the United States, publications demonstrating comparable findings were beginning to emerge. The 1990 Epidemiological Catchment Area (ECA) study found that 53% of people who abuse drugs have at least one comorbid mental illness (Regier *et al.*, 1990). In the 1994 National

Comorbidity Study (NCS), 48% of the 8090 people surveyed between 15 and 54 years of age reported a substance misuse disorder or psychiatric illness during their lifetime (Kessler *et al.*, 1994). A large-scale study of people diagnosed with mental illness in the US found that 29% had a lifetime history of either drug misuse or dependency (Miller *et al.*, 1990). Furthermore, only half of those with comorbidity were actually receiving treatment that addressed both conditions (Kessler *et al.*, 1996).

In 1996 a report was commissioned to assess the available literature to date (Crome, 1999a, b). On the basis of the findings of this review, the Department of Health set up a dual diagnosis steering group in December 1997 to develop policy on 'dual diagnosis' in the context of the Department of Health's National Service Framework for Mental Health (Crome, 1999a, b; Department of Health, 1999). Contributions from this steering group and an expert seminar in 1998 began to have a bearing on policy development from then on.

The Department of Health's Dual Diagnosis Steering Group, which worked under the auspices of the Serious Mental Illness project in the Department of Health, produced guidance on the implementation of mental health policy and good practice relating to dual diagnosis when it reported to the Mental Health Task Force (Department of Health, 2002). The direction of policy was to include responsibility for addressing the needs of those with dual diagnosis (in particular those with severe mental illness) within mainstream mental health services, whilst recognising the role specialist substance use services may play in this and that such specialist services also need to respond to the needs of those with dual diagnosis within their care. This mainstream approach was seen as key to responding to the level of need presenting in mainstream mental health services.

At about the same time, the Department of Health made substantial funding available to the College Research Unit of the Royal College of Psychiatrists. The brief was to produce a literature review on psychiatric comorbidity and substance misuse and to develop a training manual for healthcare professionals in general psychiatric services (Banerjee *et al.*, 2002; Crawford *et al.*, 2003).

The Department of Health also funded research under the Drug Misuse Research Initiative, the overall aims of which were to:

- Contribute to the evidence base.
- Improve service provision.
- Inform policy.

Several of the studies that were funded are described in this paper (Weaver *et al.*, 2003; Macleod *et al.*, 2004a, b; Frisher *et al.*, 2005). These studies provided new information on the following:

- Types of comorbidity.
- Trends in comorbidity.
- Treatment of comorbidity in primary and secondary care.

Methodological uncertainties

Comparisons between different datasets are problematic for a number of reasons, including the characterisation of the subject group by clear definition of the population with regard to substance use, misuse, harmful use and dependence and mental illness.

The determination of prevalence rates also depends on factors such as the competence of the assessment team to elicit information and to interpret it, the clinical situation in which the assessment takes place, and the severity of the different combinations of comorbid conditions and what impact this itself has on the assessment process.

Furthermore, the time-frame in which conditions may co-occur, for example simultaneously, within a year of each other or over a lifetime, needs to be rigorously defined at the outset. The epidemiological studies described earlier very often do not allow differentiation of the sub-types identified previously, such as bipolar depression and alcoholism. Since these studies are cross-sectional, it is difficult to make inferences from them about causality.

The unmet needs of particular groups cannot easily be identified and, therefore, neither can their treatment requirements. As mentioned above, comorbid patients may be given a wide variety of treatments including psychological and pharmacological interventions. Clear description of specific interventions (sometimes combinations of psychological and pharmacological) may reveal that these too vary greatly. One example is that of a 'brief' or 'minimal' intervention, which in different studies has been defined as taking 5 minutes, 20 or 30 minutes, or even up to one hour a week over a three-week period.

However, in the recent studies that have been undertaken some of these methodological limitations that have been described have been taken into account. This has served to demonstrate how complex the issues surrounding the study and interpretation of research into comorbidity are, and to give some indication of how to try to avoid pitfalls.

Background research

OPCS National Psychiatric Comorbidity Survey

The National Psychiatric Comorbidity Survey assessed psychiatric morbidity and substance use in 2000 (Coulthard *et al.*, 2002). The study paints a picture of extensive substance misuse in the general population and indicates that people with these problems are utilising other health services, such as general practitioners and mental health services (Coulthard *et al.*, 2002).

Men (12%) were more likely to be dependent on alcohol than women (3%). Younger people, of White ethnic origin, in manual occupations, with higher incomes, and who were single or cohabiting, drank more heavily. Fifteen per cent of those with alcohol dependence had consulted with their general

practitioner in the previous two weeks. Eighty-two percent of those who had stopped drinking had spoken to their general practitioner in the previous year, compared to 61% of the general population.

The prevalence of dependence on any drug was 4%, of which cannabis dependence was reported most often (3%). The prevalence of drug taking in the previous year in 16-64 year olds had increased from 5% to 12% since 1993. Four percent of those who had ever used drugs, which was estimated to be 27% of the total population surveyed, had experienced an accidental overdose. People with drug dependence were likely to be young, male, unmarried, unemployed, in financial difficulty, to be receiving current treatment, and to have spoken to a general practitioner about mental health problems or to have used community services, which suggests a degree of comorbidity in this population. Since it is estimated that there are approximately 200,000 problematic drug misusers in the UK (Frischer *et al.*, 2001) and it is increasingly well documented that drug problems are associated with other substance problems such as smoking and alcohol consumption (Best *et al.*, 2000), a substantial proportion of people who have drug problems are likely to have multiple health and social problems.

Furthermore, men (11%) were more likely than women (7%) to report heavy smoking; those aged 20-24 had the highest prevalence of 44%. Smokers also had fewer qualifications, were more likely to be unemployed or in a manual occupation, to be in financial difficulty, to have lower household income, and to live in an urban area. Those in this group were more likely to be receiving treatment such as medication, counselling or therapy, visiting their general practitioner or accessing day, in-patient or out-patient services for mental and emotional problems. The impact of smoking on mental health, as compared with physical health, is often forgotten, and is another aspect of psychological morbidity in those who use nicotine.

Thus population and clinically-based longitudinal studies consistently demonstrate the elevated levels of substance misuse in psychiatric patients (Menezes *et al.*, 1996; Crawford, 2001).

The National Psychiatric Comorbidity Survey also found that people with obsessive compulsive disorders have high rates of hazardous drinking, alcohol and drug dependence. Neurotic disorders were found to be associated with substance misuse: while 1% of the population are classified as moderately or severely dependent on alcohol, 2% of those with a neurotic disorder, 5% of those with a phobic disorder, and 6% of those with two or more neurotic disorders are classified as such. Although women were more likely to have a neurotic disorder (20% versus 14%), men with a neurotic disorder were more likely to engage in hazardous drinking, to be dependent on alcohol, to be more heavily dependent on alcohol and to use and be dependent on drugs (Singleton *et al.*, 2001).

These conditions result in multiple social and physical as well as psychological complications, which cluster together. Patients present to a whole range of medical professionals and other healthcare services, including accident and emergency, paediatric, geriatric, general medical and surgical,

primary care, and, of course, specialist addiction units (Lewis and Drife, 2001; Gfroerer *et al.*, 2003; Crome and Bloor, in press a, b, c).

National Treatment Outcome Study

In the National Treatment Outcome Study (NTORS) (Gossop *et al.*, 2003), where patients were receiving help for drug misuse, a fifth of all NTORS clients received treatment for a psychiatric illness prior to seeking treatment for their drug misuse problems (Gossop *et al.*, 2003), and polydrug use was particularly related to psychiatric problems (Marsden *et al.*, 2000). Higher levels of psychiatric distress were seen in females.

Examples of recent UK studies where attempts have been made to address some of the methodological, clinical and policy issues described above

National comorbidity study

Frisher *et al.* (2004) studied diagnosed psychiatric illness and substance misuse in 230 general practices in England and Wales from 1993 to 1998. A comorbid case was defined as one with diagnosed substance misuse (not including alcohol and tobacco) and psychiatric illness within a calendar year. A potentially chronic comorbid case was one that met this definition and in addition was treated in subsequent years for either psychiatric illness or substance misuse conditions.

Given that patients might not divulge information, the reported rates should be regarded as minimum estimates. The study demonstrated that the annual period prevalence increased every year from 1993-1998 in all psychiatric groups (e.g. psychosis, schizophrenia, paranoia, neurosis, and personality disorder). The estimated number of comorbid cases in England and Wales rose from 24,226 to 39,296. Working on the assumption that this increase was to continue at the same rate over the next five years, we can estimate that 53,268 patients would have been seen in 2003. There was an increase in all age-groups (except 65-75 years), in men (79% increase), and women (44% increase), and the average age at primary diagnosis decreased from 38 to 34 years. There was a 147% increase in psychoses, 128% in schizophrenia, 144% in paranoia, 62% in neuroses, and 55% in personality disorder. A very high proportion (80%) of comorbid cases were newly diagnosed in each study year, indicating a rapid increase in the size of the cohort.

This is the first time that comorbidity has been systematically analysed in UK primary care settings and provided information on the nature and extent of comorbidity in primary care. Not only was comorbidity estimated as increasing by about 10% each year in addition to which, as noted above, comorbid cases were also becoming younger.

Evidence of this increasing problem has resource implications for prevention, treatment, training and policy. Nevertheless, this is likely to be the tip of the

iceberg, as this study did not set out to examine comorbidity associated with alcohol and nicotine, nor did it focus on associated physical problems. Future work should focus on extending the time period of the study to the current time, including alcohol and smoking as well as physical comorbidity, and the development of tools and strategies to enhance early detection and management in primary care in conjunction with other agencies.

Psychosocial consequences of cannabis and other illicit drug use by young people: A systematic review of longitudinal, general population studies (Macleod et al., 2004a, b).

In this study 48 prospective observational studies were identified from a wide-ranging computerised search, expert contact, and an abstracting journal (*Addiction Abstracts*). A quality assessment was undertaken and 16 studies were classified as of “higher methodological” quality. Most of the drug-specific results related to cannabis. Only one study was British.

Cannabis was inconsistently associated with self-reported psychological problems. Some studies found no association. The outcome of clinical mental illness was only reported in one study, though increased problems and increased use seemed to be associated. Cannabis use was also inconsistently associated with ‘antisocial’ or ‘problematic’ behaviour (mostly uncorroborated self-report). In all these analyses, adjustment of estimates for potential confounding led to attenuation.

This illustrates the severe danger of drawing conclusions about comorbidity. This is compounded by the fact that in all but one of the studies the populations were not clinical samples, and therefore interpretation of the evidence must be very carefully considered.

In summary, the review could not establish strong evidence of a causal association between cannabis and psychosocial harm. Any association that was demonstrated appeared not to be *specific*, for example tobacco and alcohol appeared to demonstrate similar associations. Any dose-response relationship was too complex to investigate. It was also possible that ‘minor’ psychological symptoms preceded, or even precipitated drug use, i.e. reverse causation occurred. Bias might play a role, as might confounding, since cannabis use and adverse psychological outcomes seem to share common antecedents.

Causal relations between cannabis use and psychosocial harm could plausibly be mediated through biological mechanisms or social processes related to cannabis use. These relationships have different policy implications. For example, if cannabis use were to be related to psychosocial harm through biological mechanisms, research would be needed to demonstrate effective means of reducing it. If, on the other hand, cannabis use were to be demonstrated to be related to psychosocial harm through social pathways, then it is suggested that issues surrounding the legalisation of cannabis would need to be explored further.

From a policy perspective, the authors emphasised that these findings should not be interpreted as indicating that cannabis is harm/less. For instance, the study did not consider physical health outcomes. Cannabis may be associated with physical harm, especially since users may smoke tobacco with it. The authors concluded that “better evidence was needed in relation to cannabis, which is widely used, and other drugs, which though less widely used, might have important effects”.

Substance misuse and mental illness in community mental health teams and substance misuse services (Weaver et al., 2003)

Weaver *et al.* (2003) took a different angle by measuring comorbidity in patients with mental illness and substance misuse in community mental health teams and drug and alcohol services in four urban UK centres. In this cross sectional survey they demonstrated very high levels of comorbidity: 75% of the adult mental health population had a psychotic disorder, and most of the remaining patients had severe depression. Two-thirds of the patients rated positive for two or three of the following disorders: psychosis, affective and/or anxiety disorder, personality disorder. In the drug services 9/10 patients reported lifetime opiate use and three-quarters lifetime injecting.

Furthermore, 44% of Community Mental Health Team patients reported past-year drug use and/or harmful alcohol use. Harmful alcohol use was reported by 25% of patients, and problem drug use by 30%. Drug dependence was identified in 1/7 patients. Within the substance misuse patients, 80% of alcohol patients had a past year psychiatric disorder. Psychotic disorders are present in 8% of drug clients and 20% of alcohol clients. Affective or anxiety disorders were reported in two-thirds of drug patients and 80% of alcohol patients. While acknowledging the study limitations and possible lack of generalisability (e.g. due to cross-sectional design, treatment populations, only four centres), Weaver noted that “Indeed, comorbid patients may be the core client group of mental health services in certain inner city areas where the prevalence is dramatically high” (Weaver *et al.*, 2003). He noted that this study indicated a higher level of comorbidity than previous studies (Menezes *et al.*, 1996).

The policy implications of this study are wide-ranging. Comorbidity of psychiatric disorders and substance misuse is very prevalent in those receiving treatment for one of those conditions. Despite this, detection of these co-occurring conditions is low, so that patients are not receiving treatment for either substance misuse or psychiatric problems. The study concluded that, with the present-level resources in both substance misuse services and community mental health teams, it was unrealistic to expect these services to manage comorbidity as they are configured. New ways of working, including enhancement of competencies of staff working in both substance misuse and psychiatric services, engagement of primary care, and resourcing current services so that assessment, treatment and management of this group of patients can be supported with evidence-based interventions are suggested, as is evaluation of these strategies.

Individual and population risk of drug use among adolescents attending an English Youth Offending Team: An epidemiological approach (Frisher et al., 2005)

This study investigated 180 young people referred to a Youth Offending Team in Wolverhampton. The data were presented as an example of the characteristics of drug misuse in young people in a criminal justice agency, as well as an example of a new method of analysis in which Attributable Risk (AR) and Population Attributable Risk (PAR) were determined. AR is the proportion of disease (in this case 'drug use') among exposed cases (in this case, those experiencing risk factors such as educational problems) that is attributable to the exposure. PAR is the proportion of disease in the total population (exposed and unexposed cases) that is potentially attributable to the exposure.

A questionnaire, the Wolverhampton Health Profile, which covered health, lifestyle, drug use, relationships, psychological state, education, and accommodation, was developed. Twenty-eight potential risk factors were extracted from the questionnaire. Descriptive statistics demonstrated that 75% of respondents were male, and 25% female. The average age at interview was 15 years for males, and 14.6 years for females. Fifty-five percent *never* used drugs, 19% had used occasionally (less than once a week), and 26% used regularly (at least once a week). Twenty-six percent of those who were regular drug users had started drinking at the age of 13-14 years old. Sixty percent were current smokers, having started at the average age of 12.4 years. Fifty-five percent were current drinkers, having started drinking at the average age of 13.2 years.

Fifty-six percent had experienced bereavement of someone they felt close to. Seventeen percent lived in families where illegal drugs were used. Sixteen percent lived in a household where someone was drunk more than once a week, and 16% in a household where violent behaviour was exhibited. Twenty-nine percent did not attend, or had not attended, school regularly.

Six risk factors were identified: began drinking at a young age; family users more likely to use drugs; family users more likely to get drunk; current drinking; current smoking; friends using drugs. Where a case had been exposed to all six risk factors, the probability of that individual being a regular user was 78.4%, an occasional user 21.5%, and that they had never used 0%. The corollary is that a young person whose only risk factor was 'friends using drugs' had an 88% chance of being a non-user, a 6% chance of being an occasional user, and a 6% chance of being a regular user.

It is also important to appreciate the occurrence of risk factors in the population. For example, a risk factor may be weakly predictive but very common (as is the case with current smoking) *or* it may be strongly predictive (as is familial drug use), but relatively uncommon. Thus, it might be more effective for policy makers to reduce smoking than to direct policy at those with drug-using families.

The policy implication of this kind of approach suggests that there needs to be caution in relation to attribution of causality, and hence a 'solution', to the interpretation of data. This study provides the first estimates of how exposure to risk can predict individual and population risk of drug use in a vulnerable population. This methodology can be applied to other datasets on risk factors for drug use. Determination of PAR can demonstrate which exposures have most relevance to the community and in this way help service providers and policy makers understand how risk factors for drug use differ at individual and population levels. In this study current drinking and smoking and initiation of drinking at a young age, as well as peer drug use and familial drug and alcohol use, were predictive of regular drug use.

Summary of the epidemiological approach

What is the value of epidemiological research in this complex area?

- To raise awareness of prevalence and incidence.
- To understand and appreciate the differences between causation, association, relationships, consequences, and risk.
- To use and interpret the above information critically to inform treatment interventions and service delivery, planning, and provision.
- To develop better, and perhaps more integrated, systems of data collection at local (e.g. health and social care agencies), national, and even the international level.

Notwithstanding the frustrations of a wide range of difficulties in launching, completing and interpreting these data, it is hoped that this article has gone some way towards demonstrating the value of improved epidemiological evaluations in the UK, which may begin to pave the way for more appropriate service provision for this needy group.

The Department of Health policy implementation guide on good practice in dual diagnosis was published in 2002 (Department of Health, 2002). The focus was *severe mental health problems and problematic substance misuse*. Tobacco was excluded. The fundamental tenet of the guide was that "Substance misuse was usual rather than exceptional" amongst people with severe mental health problems, and that patients with these dual problems deserve high quality patient focussed integrated care "which should be delivered within mental health services...". This policy is referred to as 'mainstreaming'. The document included advice on the need for agreed and focussed definitions of comorbidity; common assessment tools; the development of care pathways; confidentiality; designation of a lead clinician and a lead commissioner for dual diagnosis; support from specialist dual diagnosis workers; and development of a training strategy for staff in assertive outreach, community mental health teams, inpatient units. The guide did not have the benefit of the findings of these and other studies to better inform research and policy initiatives but it did accept the need for more United Kingdom based research on the advantages of integrated care - be that a dedicated service model, shared care between specialists, or liaison. The studies summarised above outline a series of methodological approaches,

present a range of results, and raise a series of questions. Some of these relate to the need for integration of primary and secondary care, the resources required for training and implementation of guidance, the real need for inclusion of physical health as well as smoking and alcohol when 'dual diagnosis' is considered, and cognisance of the criminal justice agenda.

The focus of the research presented is mainly on adults, and sometimes on younger adults. Consideration of children and adolescents (Farrell *et al.*, 1998; Crome and Bloor, 2005) and the older population (Crome and Crome, 2005) is largely lacking. The implications of this gap in the knowledge base are wide-ranging. Early screening and identification is more likely to lead to effective treatment intervention for which there is now steadily accumulating evidence at both ends of the lifespan, as well as in the adult population

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Chapter 3 The neurobiological and neuropsychological perspectives in comorbidity

H L Alderson and K Matthews

Introduction

The co-existence of substance abuse problems or addiction in individuals with another psychiatric disorder is known as comorbidity, or dual diagnosis. Patients who are diagnosed with major psychiatric disorders exhibit substance abuse problems at a much higher rate than is observed in the general population. Substance use problems are most commonly seen in those diagnosed with personality disorders, anxiety disorders, depression and schizophrenia.

Recent studies suggest that approximately one-third of those with a diagnosis of psychiatric disorder have co-morbid substance use problems, excluding smoking, but including alcohol use disorder (Regier *et al.*, 1990; Farrell *et al.*, 1998). If smoking is also considered, the figures are higher still. In a UK study (Farrell *et al.*, 1998), 31% of the general population were found to be smokers, in comparison with 74% of those with major psychiatric disorders. The same study found that 5% of the general population reported using at least one illegal drug over the past year, compared with 10% of those with major psychiatric diagnoses.

Although the highest rates of co-morbid substance use are found amongst those diagnosed with personality disorders [84% according to the Epidemiologic Catchment Area Study (Regier *et al.*, 1990)], it is important to note that one of the DSM-IV diagnostic criteria by which antisocial personality disorder may be diagnosed is the presence of a substance abuse disorder. Co-morbid substance use (excluding smoking) is seen in 47% of those diagnosed with schizophrenia and 32% of those suffering from major depression (Regier *et al.*, 1990), and it is these disorders that represent the focus for this review.

Comorbidity between disorders may be explained either in terms of a common underlying mechanism for both disorders, or alternatively, that the presence of one disorder increases the likelihood of developing the other. This chapter will review hypotheses regarding the possible neurobiological and neuropsychological mechanisms underlying co-morbid substance use by patients diagnosed with depression and with schizophrenia, and will start by evaluating animal models of such disorders, frequently used in assessing these hypotheses.

Animal models of human psychopathology: a worthwhile activity?

The neural substrates of the cognitive, affective and motor abnormalities that mediate the major psychiatric disorders, including depression and substance misuse, have yet to be defined. Although neural imaging techniques and

detailed neuropathology are advancing our knowledge at a rapid pace, a further approach to this problem has been to attempt to model the complex neurobiological and behavioural alterations associated with human psychopathology in experimental animals. This approach is controversial and has aroused many negative and hostile reactions from those who have argued that human cognitive and emotional phenomena cannot be induced, recorded or manipulated in non-human species. Of course, many animal models of human disease have proven useful in elucidating the basic mechanisms of disease processes; others have assisted in the development of novel and more effective treatments. Within many areas of clinical medicine, compared with psychiatry, both clinicians and basic scientists enjoy the relative luxury of working within a coherent patho-physiological taxonomy. Sometimes, disease classification can be considered at a molecular level and, therefore, justifiable confidence exists with respect to the aetiological and construct validity of the relevant animal models. However, psychiatry remains devoid of such a patho-physiological or molecular taxonomy and is ultimately reliant upon unwieldy and imperfect syndromal classification tools.

However, epidemiological studies regularly raise critical questions concerning the interactions between the developing nervous system, early experiences, social influences and life events. Many of these questions are simply not amenable to direct study, notably those relating to the neural substrates of psychopathology and the mechanisms by which environment influences the predisposition to and development of illness. Fortunately, studies conducted using experimental animals permit the design of prospective, hypothesis-driven, experimental manipulations of independent variables in precisely the manner that is impossible in human subjects for ethical and logistical reasons. Studies using experimental animals also offer the opportunity to exert control over many of the variables which epidemiological research suggests may be influential in the aetiology of substance misuse, for example, genotype, early social experience, and magnitude, type and duration of environmental stresses. Certain species, for example the mouse or the rat, also offer a relatively short life-span, permitting developmental study within a feasible timescale.

Clearly, there are also major disadvantages with this approach. The brain, behaviour and biology of the laboratory rat – the commonest experimental subject within this area of study - are very different from that of the human. Indeed, there is no compelling evidence that the rat exhibits, or is even capable of experiencing, any condition that resembles an identifiable human psychopathology. Nevertheless, much of the core psychopathology of a range of psychiatric disorders is believed to involve neural processes that are mediated by the so-called 'limbic brain', structures that demonstrate considerable architectural and functional homology with those of other mammals such as the rat. Hence, it may be premature to discard a potentially useful source of knowledge that offers the potential to improve our understanding of clinical presentations that are amongst the most common, debilitating and difficult to treat within medicine.

Focus on depression and substance use: how can animal models inform clinical study?

Depression represents the fourth-ranked cause of disability and premature death world-wide, and is predicted to attain second ranking by the year 2020 (Murray and Lopez, 1996). Serious depressive disorders afflict approximately 7% of individuals at some point in their lives, with less severe manifestations afflicting around 20% (Judd, 1997). Depressive disorders are chronic, often life-long illnesses, with a high risk of recurrence (Judd, 1997). Despite recent advances in the definition of neuropsychological and neurobiological changes that are associated with depression, our understanding of its aetiology and patho-physiology remains rudimentary. However, we do know that the risk of developing depression is not equally distributed across the general population. Epidemiological research has identified several potent risk factors that increase the probability of developing depression, notably female gender, a history of depressive disorder in the immediate family, early childhood adversity and stressful life events in adulthood (Smith and Weissman, 1992). Indeed, the role of early stress as a mediator of vulnerability and of adult stress as a precipitant of depression is acknowledged as influential by contemporary psychological (Beck *et al.*, 1979) and neurobiological (Nemeroff, 1998) explanatory models. This predisposition, or vulnerability, to depression is a poorly understood and complex product of genetic and environmental factors that somehow influences the psychological perception of, and response to, social and environmental events, translating them into neuro-physiological changes.

Comorbidity between depression and psychostimulant drug use; for example nicotine and cocaine, is common (Altman *et al.*, 1996). This association is of major importance for public health. By 2020, tobacco is expected to cause more premature death and disability globally than any single disease (Murray and Lopez, 1996). The combined impact of tobacco smoking and depression will be immense. There are several hypotheses that attempt to explain the association between drug misuse, such as tobacco dependence, and depression (Markou *et al.*, 1998). First, the vulnerability to depression and the vulnerability to self-administer psychostimulants may be conferred by the same genetic and environmental factors, perhaps even sharing common neural substrates. Second, depression may modify psychostimulant drug experience rendering repeated use more likely or may even render some aspects of drug use 'therapeutic'. Third, repeated psychostimulant use may lead to brain changes that lead, in turn, to depression.

Many studies have highlighted the increased prevalence of different forms of substance misuse in populations who also have positive lifetime histories of major depression. Whereas the prevalence of major depression within the general population is around 7%, much higher rates have been shown in populations with abuse histories for opiates, cocaine, amphetamine, alcohol, and tobacco smoking (Regier *et al.*, 1990). Like depression, an increased risk of acquiring a substance misuse behavioural phenotype has been shown to be associated with genetic factors (Uhl, 2004), early adversity (Pirard *et al.*, 2005) and adult life stressors (Goeders, 2003).

Although there are no symptoms, nor any other clinical features, that are pathognomonic for depression i.e. indicate without doubt its diagnosis, assumed 'core' psychopathological phenomena include a blunting, or absence, of the capacity to experience pleasure (anhedonia). This symptom is generally thought to be attributable to changes in the functioning of 'brain reward systems' and can also present as a feature in patients with substance misuse – particularly during drug withdrawal. Thus a target neuro-anatomy and circumscribed physiological system can be readily identified that might account for the apparent relationship between depression and substance misuse. At the simplest level, it is possible that both depression and the withdrawal stage of the substance misuse cycle are associated with modified neurochemical transmission within specific neural structures, potentially dopamine transmission within the basal forebrain structure, the nucleus accumbens (Barr *et al.*, 2002), and our understanding of this comes principally from examination of animal models of depression. For cocaine, amphetamine, and nicotine, the facilitation of dopamine neurotransmission within the mesocorticolimbic dopamine system appears to be critical for the acute reinforcing actions of these drugs. There are now compelling data from animal studies to suggest that withdrawal from such drugs following chronic exposure leads to reduced mesocorticolimbic dopamine transmission (Parsons *et al.*, 1991; Rossetti *et al.*, 1992) and that such changes are robustly associated with changes in reward thresholds as defined by direct intracranial electrical stimulation (Paterson *et al.*, 2000; Harrison *et al.*, 2001). Clinical pharmacological data on the treatment of depression are broadly compatible with the hypothesis that increased dopamine transmission is associated with the elevation of mood and reduced transmission with lowering of mood (Willner, 1995). Hence, a plausible, albeit simplistic, neurochemical explanation for the increased comorbidity between depression and psychostimulant abuse is readily identifiable.

The case for this putative shared neurophysiology becomes stronger when the neurobiology of mammalian responses to stress is considered. As mentioned earlier, both depression and substance misuse are believed to be associated with histories of early environmental adversity and adult stress. The application of stress to experimental animals has been shown to impact upon responsivity for reward and to modify neurochemicals within the mesocorticolimbic dopamine system (Zacharko *et al.*, 1983; Anisman and Zacharko, 1986; Zacharko and Anisman, 1991). The mediating neural substrates of psychostimulant drug taking, withdrawal, depression and the physiological consequences of stress each co-localise within the mesocorticolimbic dopamine system. Although other brain structures and processes are also likely to play important roles, a plausible neural target for detailed study is readily identifiable.

There is considerable evidence that manipulation of the early social environment in experimental animals can lead to enduring changes in hormonal responsivity to stress. Similarly, accumulating evidence indicates that an animal's response to a drug can be profoundly affected by early environmental influences (Alexander *et al.*, 1978; Einon and Sahakian, 1979; Marks-Kaufman and Lewis, 1984; Schenk *et al.*, 1987; Boyle *et al.*, 1991). However, if manipulations of social environment, particularly early in life, can

exert influence over adult responsivity to stressors and drug responsiveness, can they also impact upon other key behavioural constructs that might be relevant to comorbidity between substance misuse and depression? A model capable of encompassing developmental influences that lead to an adult hyper-responsivity to stress alongside changes in behavioural responses to reward (drug and non-drug) could represent a major advance – particularly if these changes were associated with regionally specific changes in brain structure and function similar to those reported in depression. We have therefore conducted a series of studies describing the adult behavioural effects of a specific repeated maternal separation procedure conducted during the neonatal period in rats (Matthews *et al.*, 1996, 1999, 2001; Matthews and Robbins, 2003). Early separation appears to alter adult vulnerability to acquire cocaine self-administration such that acquisition is *enhanced* at moderate to high doses and *attenuated* at lower doses (Matthews *et al.*, 1999). This pattern of responding can be considered broadly opposite to that described following neonatal handling or chronic stress where acquisition is generally facilitated and the dose-effect function elevated (Altman *et al.*, 1996). It seems clear that there is considerable plasticity in behavioural responses to drugs and that environmental stimuli (including social stimuli) are amongst the most potent influences.

Amongst the many implications of these data is that altered early environment - perhaps by mimicking human childhood adversity - can exert significant effects on animal models of drug-taking behaviour (Matthews *et al.*, 1999). In the model described above, there are also reasons to believe that there are enduring changes in hormonal responsiveness to stress (Meaney *et al.*, 1993) and a range of alterations in the capacity to respond to rewarding stimuli (Matthews and Robbins, 2003). Amongst the brain structures that appear to be functionally modified within this model, is the nucleus accumbens (Matthews *et al.*, 2001). Similarly, the application of stress during adulthood can dramatically modify vulnerability to acquire psychostimulant drug self-administration. The effects of stress on drug responsiveness in experimental animals are complex, involve multiple neural systems and seem to have a degree of developmental specificity. Interestingly, the effects of environment are frequently gender-dependent. Explanations for altered drug-taking behaviour in such models will require careful delineation of the neurochemical, neuroendocrine and neuro-anatomical sequelae of the environmental manipulation. Such studies may help to define robust behavioural phenotypes relating to the altered susceptibility to self-administer drugs of abuse and thus to develop valid animal models of vulnerability. The challenge thereafter is to take this acquired knowledge and to develop our understanding of the multiple factors that lead to failed self-regulation of human drug taking and how this interacts with depressive disorders.

Focus on schizophrenia and substance use: evidence from animal models and beyond

Comorbidity between schizophrenia and addiction is seen at particularly high rates, both compared with the normal population and with patients suffering from other psychiatric disorders. Studies have suggested that up to 60% of

patients with schizophrenia have a history of abusing illegal drugs. Cannabis and psychomotor stimulant drugs are abused at particularly high rates by patients with schizophrenia. Legal drugs are also used at higher rates than in the general population. Between 70% and 90% of patients with schizophrenia have a history of nicotine addiction, and approximately 35% have had alcohol abuse problems (Regier *et al.*, 1990; Farrell *et al.*, 1998). Indeed they may also use drugs more heavily than do other addicted populations; this is particularly the case with nicotine use (Farrell *et al.*, 1998).

The high rate of co-morbid addiction with schizophrenia is not immediately explicable, and is, superficially, somewhat paradoxical. Schizophrenia has long been postulated to be associated with hyperactivity within the mesolimbic dopamine (DA) pathway, originating in the ventral tegmental area (VTA) and innervating the nucleus accumbens (NAcc). The DA hypothesis of schizophrenia suggests that the positive symptoms of the disorder result from this DA hyperactivity. Drug-taking is also linked to hyperactivity within the mesolimbic DA system. Drugs of abuse cause increases in DA levels within this system, and this is thought to underlie their addictive nature (Di Chiara, 2002; Robinson and Berridge, 1993, 2003). Thus, drug-taking by patients with schizophrenia may actually worsen some of their symptoms, and makes anti-psychotic medication regimes more difficult to implement (Duncan *et al.*, 1999; Negrete, 2003; Margolese *et al.*, 2004). So, why would a patient with schizophrenia take a drug which actually exacerbates some of the symptoms of their disorder?

There are at least two possible explanations for co-morbid schizophrenia and addiction which must be considered. The first is the 'self-medication hypothesis', which suggests that drug-abuse is a consequence of schizophrenia. This hypothesis is explicable in terms of negative reinforcement: the drug-taking alleviates some of the unpleasant symptoms of schizophrenia. Given the evidence for the worsening of some symptoms in drug-taking schizophrenics, this may seem to be an unlikely explanation. However, although this may be the case for some of the positive symptoms of the disorder, there is some evidence for other symptoms being relieved by drug-taking. The alternative approach is that there is some common underlying neuropathology that makes an individual susceptible to both schizophrenia and addiction.

The self-medication hypothesis was outlined by Khantzian (1985) in an attempt to explain addiction to cocaine and heroin. The hypothesis suggests that addicts are predisposed to becoming drug-dependent because they are using drugs in order to cope with either general psychological problems (e.g. traumas such as loss of a partner, inability to find work, etc), or with a specific psychiatric problem such as depression or schizophrenia. This hypothesis suggests that it should be possible to predict the drug an addict will choose according to the symptoms they are experiencing, and also predicts that drug-dependence should follow on from the development of the psychological or psychiatric condition.

This very general approach to the self-medication hypothesis may be applied to patients with schizophrenia with co-morbid drug-dependence problems. It is

possible that drugs are used in order to cope better with socio-economic disadvantage that accrues from disability associated with their illness, although it is important to remember that not all schizophrenics are drug-users. Patients with schizophrenia are much more likely than the general population to be unemployed and to experience social exclusion and family breakdown (Dixon, 1999). Patients with schizophrenia and with co-morbid addiction problems are more likely to have experienced significant trauma during childhood, often on more than one occasion (e.g. death of a parent, abuse, domestic violence) than those without (Scheller-Gilkey *et al.*, 2002). Additionally, such patients with co-morbid addiction have higher levels of general stress, such as housing problems, lack of employment, and family breakdown than those without (Dixon, 1999), although the cause-effect relationship between these factors is not clear. However, it is clearly possible that addiction may be more common in patients with schizophrenia than in the general population because drugs are being used to help the individual cope with the effects of traumatic and stressful experiences.

It is also possible to apply the self-medication hypothesis of addiction to the problem of co-morbid schizophrenia in a more directed manner, linking drug use with specific symptoms. The relatively high rates of alcohol and cannabis use amongst may be due to the effects of these drugs on the positive symptoms (psychotic symptoms) of the disorder. These effects may be to reduce the incidence and/or severity of psychotic episodes, or enable the patient to cope better with such episodes through their anxiolytic properties. However, evidence for this suggestion is limited (Krystal *et al.*, 1999). There is greater evidence to support the suggestion that patients with schizophrenia may use drugs, specifically psychomotor stimulant drugs such as amphetamine and cocaine, in order to ameliorate negative symptoms that they may be experiencing. So-called 'negative symptoms' include motor inactivity, apathy, loss of initiative and social withdrawal. It is thought that such symptoms may result from hypoactivity within frontal cortical regions (Paulman *et al.*, 1990; O'Donnell and Grace, 1998). Drug use is particularly associated with increased levels of dopamine (DA) within the mesocorticolimbic system of the brain, which includes the frontal cortex. It has been reported that patients with schizophrenia smoke less when on medication that is effective in reducing negative symptoms (Lyon, 1999). This is also supported by the finding that negative symptoms are less severe in patients with schizophrenia who have drug abuse problems than in those who do not (Green *et al.*, 2004), although the positive symptoms that they experience are worse.

There is also some evidence to support the suggestion that some patients use drugs of abuse, and particularly psychomotor stimulant drugs, in order to ameliorate side effects resulting from anti-psychotic medication. Anti-psychotic drugs such as haloperidol act as DA antagonists, and this can produce motor side effects which closely mimic symptoms seen in Parkinson's disease – e.g. resting tremor, bradykinesia and rigidity of movement. Psychostimulant drug use may counteract these symptoms by increasing DA levels. It has been reported that patients with schizophrenia smoked more following haloperidol treatment than when they were unmedicated (McEvoy *et al.*, 1995a). Individuals without schizophrenia, in contrast, smoke less when given

haloperidol (Brauer *et al.*, 2001). A follow-up study examined the relationship between smoking and treatment with atypical anti-psychotics, which do not have DA antagonist properties and found that smoking patients with schizophrenia smoked less when switched from a traditional anti-psychotic to clozapine (McEvoy *et al.*, 1995b). However, the cause-effect relationship between medication and drug abuse is not clear. Those patients who are also drug users typically require higher doses of anti-psychotic medication, and therefore they are more likely to experience side effects than non drug-abusing patients.

Nicotine is by far the most commonly used drug amongst patients with schizophrenia. This preference for nicotine over other drugs of abuse may simply be due to its availability and social acceptability. However, it is also possible that high rates of smoking are due to nicotine's effects on some of the subtle attentional and cognitive deficits from which patients with schizophrenia suffer. It is well-established that patients with schizophrenia exhibit deficits in sensory gating i.e. the ability to pay attention selectively to relevant stimuli, while ignoring irrelevant ones (Ludewig *et al.*, 2003; Weiner, 2003). There is also evidence for the presence of deficits in verbal memory function and on reaction time task performance (Smith *et al.*, 2002). These types of cognitive deficit are ameliorated by nicotine (Smith *et al.*, 2002; Larrison-Faucher *et al.*, 2004), and may in turn reduce the severity of the positive symptoms which are thought to be particularly related to the incidence of sensory gating deficits (Weiner, 2003).

A number of researchers have suggested that alterations in DA activity may underlie both schizophrenia and addiction, and that these alterations result from a common dysfunction in the normal regulation of the mesolimbic DA system (Chambers *et al.*, 2001). Regulation of the mesolimbic DA system involves innervation by the hippocampus and prefrontal cortex, as well as a number of other structures. Hypoactivity in these structures will result in over activity of the DA system.

There is evidence to suggest that patients with schizophrenia may have damage to the hippocampal formation and frontal cortex (Liddle *et al.*, 1992; Arnold *et al.*, 1997; O'Donnell and Grace, 1998; Weinberger, 1999), resulting in reduced activity within these areas. This may be the result of problems *in utero* during neurodevelopment: the hippocampus in particular is vulnerable to damage during development due to the relatively long time over which its neurodevelopment occurs. Alternatively, early life stress may lead to such damage (Duncan *et al.*, 1999; Grace, 2003). Experimental rodent studies have found that extreme stress early in life, in the form of being separated from the mother, resulted in hippocampal dysfunction, similar to that which some schizophrenic patients may display, along with sensory gating deficits similar to those seen in schizophrenic patients (Bakshi and Geyer, 1999; Ellenbroek and Riva, 2003; Ellenbroek *et al.*, 2004). Damage to hippocampus and prefrontal cortex may in turn contribute to the dysfunction of the DA system which is associated with schizophrenia.

Dysfunction of the mesolimbic DA system has also been implicated in vulnerability to the development of addiction. According to the Incentive

Sensitisation theory of addiction, the DA system becomes sensitised, such that DA release in response to drug administration is increased with subsequent exposure to the drug (Robinson and Berridge, 1993, 2003). This then leads to the development of the type of compulsive drug-taking behaviour that characterises addiction. Sensitization of the DA response to drug-taking is thought to make the addict crave the drug, leading to continued drug-taking behaviour. Sensitisation is also long-lasting, and is also suggested to be responsible for high rates of relapse in detoxified drug-users.

It is suggested that in patients with schizophrenia, the hyperactivity of the mesolimbic DA system that results from damage to the hippocampus and prefrontal cortex produces a sensitisation of the mesolimbic DA system, similar to that seen following repeated drug taking (Duncan *et al.*, 1999; Chambers *et al.*, 2001). Thus, patients with schizophrenia are more likely to develop compulsive drug-taking habits following drug-use than those without psychotic illness who try drugs.

There is some experimental evidence to support this 'common vulnerability' approach to understanding the comorbidity of addiction and schizophrenia. It has been reported that some patients show an enhanced DA response to drugs of abuse (Laruelle, 2000), relative to controls. Evidence from rodent studies suggests that lesions of the prefrontal cortex or hippocampus (Goto and O'Donnell, 2003; Bennay *et al.*, 2004), made neonatally in order to model the neuropathology of schizophrenia, result in an enhanced sensitivity within the mesolimbic DA system. Such sensitisation may underlie the development of co-morbid schizophrenia and addiction. Rats which had been given neonatal hippocampal lesions were found to acquire lever-pressing behaviour in order to receive an intravenous infusion of cocaine faster than non-lesioned control rats (Chambers and Self, 2002). These same rats were also slower to stop lever-pressing when cocaine infusions were replaced by saline. This indicates that in animals with hippocampal damage, similar to that thought to be present in schizophrenia, drug-taking is more compulsive and persistent.

There is evidence to support both the self-medication and common neuropathology hypotheses of co-morbid addiction and schizophrenia. However, this is an area in which relatively little experimental work using behavioural neuroscience techniques has been carried out. Although there are a number of well-established rodent models of addiction, modelling schizophrenia in rodents is more challenging. Relatively few experimental studies have been carried out which have asked the question "How does modelling schizophrenia in experimental animals alter drug-taking behaviour?"

Conclusions

The present overview of biological factors in co-morbid substance use suggests that it is unlikely to be explained by a single, common biological mechanism. Indeed, this would be somewhat surprising given the wide variety of psychiatric symptoms experienced by patients who engage in co-morbid substance use. This suggests that there will be no one common treatment for

co-morbid substance use, both the psychiatric disorder and the substance abused must be taken into account when developing treatment programmes.

It is important to bear in mind that our understanding of possible mechanisms may be limited by the animal models of psychiatric conditions that are presently available. Animal models of both addiction and depression or schizophrenia are a long way from allowing examination of all aspects contributing to the development of such conditions. Relatively few studies have been done investigating the neuropsychology of comorbidity and it is clear that more research needs to focus on this in order that we may progress in the understanding of comorbidity. However, there is an important degree of concurrence between the results of animal and those human studies that have been done, which emphasises the importance of animal studies in this context.

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Chapter 4 The psychological/psychiatric perspectives of comorbidity

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Introduction

This review uses the term ‘comorbidity’ and ‘dual diagnosis’ interchangeably to refer to a heterogeneous population with any combination of concurrent mental health and substance misuse problems (Best *et al.*, 2004).

The main problem encountered in reviewing the literature is the different points of view on the phenomenon of comorbidity and the separate approaches taken by both mental health and addiction services. Recent studies suggest that comorbidity is highly prevalent but that longitudinal information remains limited due to restricted understanding of its natural history, stability, common risk factors, and causal relationships (Sheehan, 1993; de Lima *et al.*, 2002).

One of the main problems is related to the difficulty of making a diagnosis because of the different points of view from mental health and addiction services. Furthermore, Abdulrahim (2001) suggests that the nature and relationship of comorbidity is complex and is so for the following reasons:

- Substance use and withdrawal from substances may lead to psychiatric syndromes or symptoms.
- Intoxication and dependence may produce psychological symptoms.
- Substance use may exacerbate or alter the course of pre-existing mental disorder.
- A primary mental disorder may precipitate a substance use disorder, which may lead to psychiatric syndromes.

Lack of knowledge among health-care providers is the principal clinical barrier between the two services which decreases the opportunity for cross-fertilisation (Drainoni and Bachman, 1995).

Historically, educational institutions rarely taught a holistic approach to the treatment and management of comorbidity, and both disorders were considered separately, that is psychiatric and substance misuse disorders or any two different and psychiatric disorders (Minkoff, 1989). However in the last decade an acknowledgment of comorbidity has led to a more pragmatic integrated philosophy and approach being adopted.

Background

The significance of comorbidity and the mechanisms of the underlying psychopathology are both poorly understood within the mental health and addiction arena (Volkow, 2001).

Is comorbidity the result of a common aetiology or are patients with two disorders physiologically and/or mentally different from those with only one diagnosed disorder? Dually diagnosed patients vary greatly when we consider the specific type of association i.e. substance abuse with schizophrenia, mood disorders and other mental health problems (Posttraumatic Stress Disorder, Attention Deficit Hyperactivity Disorder and Eating disorders). It is evident that comorbidity has evoked many contentious debates. A range of different arguments have been put forward by practitioners within mental health and addiction services due to the complex presentation of these individuals. This lack of clarity and understanding between services results in patients with comorbidity being pushed from 'pillar to post' (Phillips and Labrow, 2004).

Theories that have been postulated on comorbidity are the 'self-medication' hypothesis and the 'super-sensitivity' model. Khantzian (1997) proposed in his explanation of the self-medication theory that individuals with comorbidity seek specific substances for:

- Relief of particular symptoms,
- Psychoactive substances are chosen for their particular effect.

However, there is only a limited evidence base to support this theory. The super-sensitivity model is centred on 'psychobiological vulnerability'. This model suggests that patients with mental illness show high sensitivity to low doses of drugs and alcohol, which can precipitate or trigger relapse of a psychiatric disorder (Mueser *et al.*, 1998; Rassool, 2002). The benefit of the latter explanation is that it offers an understanding that low levels of substance misuse can trigger symptoms without causing physical dependence (i.e. amphetamines) (Drake *et al.*, 1990). Conversely, most research in this area has predominately focused on schizophrenia and not on other psychiatric disorders.

There is no agreed universal definition of comorbidity and in spite of the Department of Health's guidelines (DH, 2002) acknowledging this problem, the issue has still not been addressed in the UK. The guidelines suggest that health care providers develop their own definition and service delivery for their own target population (Todd *et al.*, 2004).

However, Krausz (1996) describes four categories of dual diagnosis.

- Primary diagnosis of a major mental illness with a subsequent (secondary diagnosis) of substance misuse which adversely affects mental health.
- A primary diagnosis of drug dependence with psychiatric complications leading to mental illness.
- A concurrent substance misuse and psychiatric disorder.
- An underlying traumatic experience resulting in both substance misuse and mood disorders, for example post-traumatic stress disorder.

Although Krausz (1996) provides a comprehensive classification of comorbidity, a more pragmatic approach would also include any underlying personality disorder. However, there can be difficulties in diagnosing personality disorder accurately within the context of comorbidity as well as the

reluctance of clinicians to acknowledge personality disorder as a mental health problem (Abou-Saleh, 2004; Todd *et al.*, 2004). Moreover, new guidance from the Department of Health (NIMHE, 2003) states that service provision for personality disorders should come under the umbrella of mainstream mental health services with referral pathways established for specialist services input, i.e. addiction.

Frequently, treatment services for comorbidity are not integrated and organisational barriers may impede the appropriate detection, referral, and treatment of this patient group (Greenfield *et al.*, 1995). Agencies of mental health and addiction services rarely cater for the assessment of both types of disorder during their standard intake interview (Brems *et al.*, 2002).

Treatment modalities are strictly related to the perception of the models that try to explain the characteristics of dually diagnosed patients; in different countries there are different types of approaches to the problem. Currently, more services are focusing on delivering more robust pathways in a greater effort to increase access and retention of dually diagnosed patients. In turn this should lead to establishing better psychological and psychotherapeutic approaches.

One of the principal problems in the treatment of this client group is related to the different ways in which the staff of mental health and addiction services perceive comorbidity (Grella *et al.*, 2004). Delivery of effective services means addressing these divergent perceptions between staff with inter- and intra-agency teaching within the single addiction and mental health arena. This would facilitate better understanding and management of comorbidity (Ryrie and McGowan, 1998).

King *et al.* (2000) postulate that clients with comorbidity have more behavioural problems and more functional impairment. Furthermore, the authors suggest that the cost of treatment for a client with comorbidity is twice as high as that for a client without comorbidity. Anecdotal evidence suggests that individuals with comorbidity are prone to higher criminality, higher social deprivation, higher psychiatric morbidity, higher intravenous drug use and more likely to engage in high-risk sexual behaviours (Condelli *et al.*, 1991; Grella *et al.*, 1997; Shoptaw *et al.*, 2002; Bovasso and Cacciola, 2003). This in effect has public health implications, especially with regard to the transmission of blood-borne infections such as HIV, hepatitis B and C and an increase in sexually transmitted diseases (Bux *et al.*, 1995; Grella *et al.*, 1995; Huber *et al.*, 1997; Sullivan and Fiellin, 2004).

Other studies have pointed out the relationship between comorbidity and hospital emergency department use. Clients with comorbidity have been shown to present more frequently to emergency departments in comparison with clients with mental health problems and no co-morbid substance misuse (Curran *et al.*, 2003). Improving assessment, referral, and treatment of comorbidity could result in decreased use of emergency departments and better outcomes for this client group.

Experimental studies have supported the effectiveness of integrated intervention programmes for comorbidity (Godley and Hoewing-Roberson, 1994; Barrowclough *et al.*, 2001). These studies underline the positives outcomes in different domains: substance abuse, psychiatric symptoms, housing, hospitalisation, arrest, functional status and quality of life (Drake *et al.*, 1998). The Mentally Ill Chemically Abusing (MICA) programme in the United States adopts principles of integrated psychosocial treatment with dual diagnosis patients. Clodfelter *et al.* (2003) emphasise that the programme showed both patients and staff reporting positive experiences thus resulting in a more comprehensive assessment and treatment of comorbidity.

Empirical evidence advocates the use of an integrated model for effective treatment and management of comorbidity (Drake *et al.*, 1998; Rassool, 2002). The following critical components of an integrated approach are suggested by Drake and Wallach (2000):

1. Staged interventions: forming a trusting relationship based on engagement, persuasion, active treatment and relapse prevention.
2. Assertive outreach: intensive case management and meetings in the client's residence.
3. Motivational interventions: interventions aimed at illness self-management and helping the individual identify his goals.
4. Counselling programmes: promoting cognitive and behavioural skills.
5. Social support intervention: programmes focused on strengthening the immediate social environment to help an individual to modify his behaviour.
6. Long-term community-based perspective: rehabilitation activities to prevent relapses.
7. Comprehensiveness: integrated programmes for the two problems.
8. Cultural sensitivity and competence: modifications for cultural and other local circumstances.

Most of the empirical research supporting the use of an integrated model for comorbidity has been undertaken in North America, with a corresponding lack of research in the United Kingdom and Europe in this field. The applicability and delivery of this expensive model may not apply to other health care providers in other countries who have different health care systems. It would seem more appropriate for other countries to develop integrated pathways within their own existing services for comorbidity; ensuring services are tailored to individual needs.

Psychiatric disorders frequently associated with substance misuse

Schizophrenia

Evidence suggests that the use of drugs and alcohol by individuals with schizophrenia antedates the onset of schizophrenia in 14% to 69% of cases (Abou-Saleh, 2004). The prevalence rates for schizophrenia and substance misuse varies in the literature. However, Dixon (1999) estimates that lifetime prevalence rates of substance use range from 40% and 70% among schizophrenic patients. Comorbidity of substance use and schizophrenia is

associated with exacerbation of schizophrenic symptoms and development of psychotic symptoms from the impact of the substance used, the quantity consumed, the route of administration and the class of the drug used (Rassool, 2002). Schizophrenia with adjunct substance use disorders is associated with a wide range of negative outcomes, such as increased rates of relapse and higher utilisation of medical and psychiatric services, homelessness, legal problems, violence, non-compliance with treatment, HIV, hepatitis B and C infection and family dysfunction.

Empirical research documents the high prevalence and deleterious consequences of substance abuse among individuals diagnosed with schizophrenia. The clinical aspects of substance abuse in patients with schizophrenia seem to indicate that such comorbidity may result from attempts at self-medication whereby patients self-medicate psychiatric symptoms including negative symptoms as well as extra-pyramidal side-effects from antipsychotic medication (Scheller-Gilkey *et al.*, 2003; Goswani *et al.*, 2004).

The self-medication theory has posed certain limitations in that substance misuse rates in schizophrenia are higher by comparison with other psychiatric populations i.e. those with depression and anxiety disorders who are known to self-medicate. Conversely, it has been proposed by biological studies of schizophrenia that drug and alcohol misuse decreases negative symptoms by increasing dopamine activity in the prefrontal cortex thus enhancing the functioning of the dysfunctional brain reward system by an increase in the dopamine based signal detection capability of these systems (Abou-Saleh, 2004).

An association between cannabis consumption and psychosis is well-established. Evidence suggests that endogenous cannabinoid levels are elevated in the cerebrospinal fluid of schizophrenic patients; this may reflect an imbalance in the endogenous cannabinoid system in schizophrenia (Leweke *et al.*, 1999).

Is cannabis aetiologically important in the development of psychosis or do individuals use cannabis to relieve the distress associated with prodromal symptoms? In an historical cohort study of 50,087 Swedish conscripts Zammit *et al.* (2002) reported that the use of cannabis during adolescence increases the risk of developing schizophrenia with a dose-dependent relationship. This was also independent of the effects of other drugs or social personality traits. The authors concluded that cannabis increases the risk of schizophrenia by 30%. Similarly, Arseneault *et al.* (2004) in a recent review on the association between cannabis and psychosis found that cannabis use in adolescence leads to a two- to three-fold increase in relative risk for schizophrenia or schizophreniform disorder in adulthood; earlier onset of cannabis use showed a propensity for greater risk of psychotic outcomes. However, the authors point out that cannabis does not provide a causative factor for the development of psychosis but forms part of a causal relationship.

An unresolved question in psychiatry has been the role that drugs of abuse have in triggering psychosis in individuals with no previous psychiatric history.

The theory that stimulants can cause psychosis through the increase of dopamine concentration in the extra-cellular site does not explain the way in which patients continue to have psychosis when they do not use stimulants.

A study by Sekine *et al.* (2003) reports an association between loss of dopamine transporters and positive symptoms in methamphetamine abusers with histories of methamphetamine-induced psychosis. Since dopamine transporters are the main mechanism for removing extra-cellular dopamine concentration, their loss in methamphetamine abusers could result in high levels of extra-cellular dopamine even when methamphetamine is no longer present. Other possible explanations are related to mechanisms like post-synaptic changes, over-adaptation of undamaged dopamine terminals, or improper rewiring of recovering dopamine terminals.

In contrast, Volkow *et al.* (2001) showed an association between dopamine transporter losses in methamphetamine abusers and psychomotor impairment compatible with 'decreased' brain dopamine activity. Another interesting question is why some methamphetamine abusers develop psychosis and others do not.

Patients with comorbidity are frequently treated with antipsychotic drugs but the impact these drugs have on craving has been inconclusive (Brown *et al.*, 2003). Clozapine, an atypical antipsychotic used for the treatment of schizophrenia, has been shown to be effective possibly because of its unique effect of releasing dopamine in the prefrontal cortex and reducing negative symptoms and substance misuse in schizophrenia (Zimmet *et al.*, 2000). However, unlike drugs of abuse which also increase dopamine in the mesolimbic system, clozapine facilitates the physiological modulation of the mesolimbic dopamine system by the prefrontal cortex (Abou-Saleh, 2004). Results from clozapine treatment have shown promising although a drawback to clozapine treatment is that a proportion of patients develop neutropenia and have to discontinue treatment. It is evident that further research is needed on the role of other atypical antipsychotics in comorbidity treatment.

The role of pharmacotherapy for treating comorbidity is clearly still in its early stages; therefore a more comprehensive approach would be to incorporate psychological therapies as well in the treatment of comorbidity. As with pharmacological treatments, evidence on the effectiveness of a particular psychological and psychosocial intervention with comorbidity is sparse. The models that have been consistent in showing validated empirical results are Motivational Interviewing, Relapse Prevention, Social Skills Training, Cognitive Behavioural Therapy and family interventions (Barrowclough *et al.*, 2001; Carey *et al.*, 2001; Haddock *et al.*, 2003).

In summary, it is evident that there is little empirical evidence to support a specific treatment approach for schizophrenia. Furthermore, screening and service development should not view individuals with a diagnosis of schizophrenia as a large undifferentiated group, but also consider the presence of a substance abuse diagnosis (Farris *et al.*, 2003). Adopting a bio-psychosocial model is advocated within integrated care pathways. Further research is needed to refine specific interventions and to improve knowledge

regarding how to implement and integrate treatment modalities.

Mood and anxiety disorders

An epidemiological study by De Graaf *et al.* (2003) of a representative sample of 7,076 adults aged 18-64 showed that of those who had ever experienced a mood disorder, 46% of males and 57% of females had a history of anxiety disorders, and 43% and 15% respectively of substance use disorders. Mood disorders were associated with all anxiety and substance use disorders, except for alcohol abuse among males. In the majority of anxiety-comorbid cases, the mood disorder arose after the anxiety disorder; the pattern for substance use comorbid disorders was more variable.

Merinkangas *et al.* (1998), in a review of six cross-national studies of patterns of comorbidity between substance use and psychiatric disorders, found there was a strong association between anxiety disorders as well as conduct and antisocial personality disorder with substance use.

There is a paucity of data with regard to the relationship of Generalised Anxiety Disorder (GAD) and substance use. Massion *et al.* (1993) found that in 63 patients with GAD, 11% had a history of drug abuse. Furthermore, Compton *et al.* (2003) found that GAD seemed to predict having more dependence diagnoses. For all types of phobia there were reported high rates of comorbidity with alcohol abuse/dependence, drug abuse/dependence and other mental health illnesses (depression, obsessive-compulsive disorder). These findings could be useful for treatment and clinical management of GAD (Dick *et al.*, 1994). Similarly, Bruce *et al.* (2001) found that comorbid anxiety, mood, and substance use disorders were very common with GAD.

Anxiety disorder is an extremely common and potentially disabling psychiatric disorder; generalised social anxiety disorder, a sub-type of the disorder, is believed to be the most common and most severe form. It is also the form that is most often associated with other psychiatric disorders (Lydiard, 2001).

The association between drug misuse and anxiety disorders, and accurate diagnosis between drug-induced states and primary anxiety disorders can be complex (Rassool, 2002). Grant *et al.* (2004), in an epidemiological survey of prevalence and co-occurrence of substance use disorders and independent mood and anxiety disorders, found a statistically significant association between most substance use disorders and independent mood and anxiety disorders. The authors stress that substance use and mood and anxiety disorders that develop independently of intoxication and withdrawal are among the most prevalent psychiatric disorders in the United States. Additionally they suggest that treatment for co-morbid mood or anxiety disorder should not be withheld from individuals with substance use disorder. This research highlights the importance of inter- and intra-agency working between addiction and mental health services.

In clinical studies the prevalence of mood disorders ranges from 12% to 88% in patients with alcohol misuse, and from 24% to 56% in patients with drug misuse (Abou-Saleh, 2004).

Compton *et al.* (2003) showed the relationship of psychiatric disorders to drug treatment outcomes; their findings suggested that the presence of major depression is associated with polydrug use and additional dependencies as well as negative treatment outcomes. A study by Arendt and Munk-Jorgensen (2004) that compared heavy cannabis users with abusers of other substances found that cannabis users had significantly high levels of depression ($p < 0.001$) when compared to users of other drugs. Furthermore, Patton *et al.* (2002) in a seven-sweep cohort study over six years of 1601 students aged 14-15 years attempted to determine whether cannabis use in adolescence predisposes to higher rates of depression and anxiety in adulthood. Their findings highlight that frequent cannabis use in teenage girls predicts later higher rates of depression and anxiety.

The presence of depression may be due to the effects of the substance used, it is therefore useful to screen out substance-related depressive symptoms from depression per se (i.e. depression that persists during at least a brief period of abstinence).

A meta-analysis to quantify the efficacy of antidepressant medications for treatment of combined depression and substance use disorders was conducted by Nunes and Levin (2004). This exercise showed that treatment with antidepressants gave only a modest beneficial effect for patients with substance abuse disorders and depression. The authors suggest that additional psychosocial therapy directly targeting the addiction must be additionally utilised. It seems that recognising depression within comorbidity may not have a negative impact on the course of addiction treatments especially if the depression has been identified from the initial assessment (Charney *et al.*, 2001). Additional treatment may compensate for greater psychopathology among co-morbid patients.

Bipolar disorder is common amongst patients with comorbid substance abuse or dependence and is associated with poor outcomes. Co-occurrence of these conditions suggests the possibility of a common biological or genetic predisposition. Alcohol dependence has been reported in approximately one-third of those with bipolar I disorder and one-fifth of those with bipolar II disorder (Rassool, 2002; Rush, 2003). Early identification and diagnosis facilitates better understanding and treatment outcomes.

Comorbidity of substance abuse and mood disorders varies depending on the substance used and its mode of action. Cocaine is a powerful central nervous system stimulant and is associated with high rates of mood disorders, both of major depression and bipolar disorder (Rassool, 2002). A study by Roy (2003) addressed the association of suicide with cocaine abusers. The role of cocaine in suicidal behaviour is explained by the fact that chronic cocaine use affects mood negatively, as evidenced by the high frequency of dysphoria and depression in cocaine abusers. Individuals with predisposing factors for

suicidal behaviour, with mood changes, could further increase their risk of suicidal behaviour, especially if they abuse cocaine.

Most of the drugs reviewed for the treatment of cocaine abstinence have been dopaminergic drugs in view of the fact that hypodopaminergic function plays a mediating role in the early stages of abstinence (Lingford-Hughes and Nutt, 2003). Soares *et al.* (2005), in a Cochrane Review of dopamine agonists for cocaine dependence, looked at the efficacy of amantadine, bromocriptine and pergolide. Seventeen studies were included, with 1,224 randomised participants. They found little evidence to support the clinical use of those dopamine agonists in the treatment of cocaine dependency, primarily due to the high drop-out rates in the study populations. Cocaine also acts on the noradrenergic and 5-hydroxytryptamine systems within the brain, inhibiting the reuptake of these neurotransmitters (Ghodse, 2002).

Certain antidepressants that share stimulant drugs' ability to inhibit neuronal reuptake of the monoamines have proved to be efficacious, such as the Selective Serotonin Reuptake Inhibitors (SSRI) fluoxetine, paroxetine and the tricyclic antidepressant desipramine (Ghodse, 2002). Lima *et al.* (2005) in a systematic review looked at all randomised clinical trials on the use of antidepressants for cocaine dependency. They found desipramine and fluoxetine performed better than other drugs. However, they concluded that there is no evidence to support the use of antidepressants in the treatment of cocaine dependency, due to high drop-out rates.

In summary, it is clear that it is difficult to determine the precise pathway to comorbid mood and anxiety disorders with substance abuse. However, it is clear that in the absence of any particular treatment approach an integrated perspective involving mood stabilisers and psychosocial interventions proves to be more effective.

Post Traumatic Stress Disorder

In Post Traumatic Stress Disorder (PTSD), the role of stress is particularly prominent since a 'stressor' triggers the disorder. Anecdotal evidence suggests high levels of substance use disorders with people who have trauma exposure and PTSD (Rassool, 2002). The review by Jacobsen *et al.* (2001) discusses how the accentuated 'stress' responses in PTSD could explain the abuse of drugs, particularly sedative-hypnotics such as alcohol, as a means of relieving PTSD symptoms temporarily. The abnormal response to stress in PTSD is believed to be mediated, in part, by enhanced noradrenergic function, which is disrupted during drug withdrawal. Drug abuse, like PTSD, is also associated with greater activation of stress circuits in the brain (Koob and Le Moal, 2001). Furthermore, dopaminergic pathways also play a part in PTSD. Acute and chronic stress leads to an increase in extra-cellular dopamine, and the dopaminergic reward systems are involved in the reinforcing and addictive properties of drugs of abuse. Therefore, both PTSD and substance misuse share the same propensity to increase central dopaminergic activity (Rassool, 2002).

Other common aspects between substance misuse and PTSD have been demonstrated, such as sensitisation and conditioned responses. Volkow (2001) states in his editorial: "In PTSD, sensitization makes the patient more sensitive to the 'stressor' and in substance abuse sensitization makes the abuser more sensitive to the 'drug'. Whereas in PTSD the individual is conditioned to an aversive stimuli (the stressor), in drug abuse the individual is conditioned to a rewarding stimuli (the drug)".

Back *et al.* (2003), in a recent study conducted among 74 treatment-seeking women with PTSD and co-morbid cocaine or alcohol dependence, found that women in the alcohol/PTSD group showed higher rates of exposure to accidents, injury, and stressful life events with higher rates of major depression and social phobia than the cocaine/PTSD group. The cocaine/PTSD group showed more occupational impairment (i.e. greater severity on the employment sub-scale of the Addiction Severity Index, less monthly income, fewer days worked in past month), greater social impairment and more legal problems.

Research suggests a need for practitioners to improve their understanding of the substance-specific profiles of individuals with PTSD and co-morbid substance use disorders for appropriate dual-diagnosis interventions.

Attention Deficit Hyperactivity Disorder

Attention Deficit Disorder (ADD) seems to be a risk factor for substance misuse in adults and a common view is that these patients use substances to self-medicate symptoms. Evidence suggests that there is a high rate of substance abuse in adults with ADHD (Wilens, 2004). While previous concerns centred on the question that stimulant therapy increases the risk of substance abuse, recent studies have indicated that pharmacological treatment can reduce the risk of substance abuse in individuals with ADHD.

Little is known about the particular patterns of ADHD symptomatology associated with different forms. Treatment for adults with ADHD and substance abuse should include a combination of psychosocial interventions alongside psychotherapy and pharmacotherapy. The initial approach should be stabilising and addressing the substance abuse (Wilens, 2004).

It is important to acknowledge that pharmacotherapy that has little likelihood of diversion and low liability, such as bupropion and atomoxetine should be initially adopted, and if necessary, progress to the use of prescribed stimulants ensuring controlled prescribing measures are adopted to minimise diversion and abuse. Monitoring of patients during treatment is paramount to ensure compliance with the treatment plan.

Conclusions

The high rate of substance abuse in patients with psychiatric disorders and vice versa causes negative impact on the patient's clinical outcome and social adaptation. In the last decade more practice guidelines have proliferated in

mental health and addiction services. Nevertheless confusion; controversy; and clinical, financial, political, and ethical issues remain. Development of integrated local practice guidelines and strategies for disseminating and implementing those guidelines is needed within different healthcare systems internationally.

Further research on comorbidity, shedding light on the mechanisms underlying these disorders, may have a direct effect on the management and treatment of comorbidity.

The issue of comorbidity is a relevant concern at national and local levels. To dismiss it would be erroneous as it has deleterious effects and cost implications for the health, social and criminal justice systems, as well as to the individual and society itself.

More robust research is needed within the arena of comorbidity. This will ensure that clients' specific treatment needs are highlighted. This in turn will enable the funding bodies to review the evidence for the appropriate treatment services to be implemented.

Integrated treatment services for severely and persistently ill patients with co-occurring mental health and substance abuse disorders could result in improved outcomes. However, to ensure this, collaborative working between mental health and addiction services is of paramount importance and urgency.

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Chapter 5 The users' point of view: a sociological perspective on the dual diagnosis phenomenon

T Greacen

A new diagnostic category in mental health

In the USA, the 1980s witnessed the birth of what was rapidly to become an extensive literature on the 'dual diagnosis' phenomenon. A new population with specific problems had been discovered: people with both psychiatric and substance use disorders. Their needs did not 'fit' into conventional treatment services offered, resulting more often than not in their exclusion from services catering only for people with 'single diagnoses' and an over-use of emergency medical services (Drake *et al.*, 1998). Conflicting theoretical and care models between mental health service providers and addiction treatment centres made organising treatment access and co-ordinating care an almost impossible task, even for the most compliant patient or the most enthusiastic and supportive family.

By the mid-1990s, epidemiological studies (Regier *et al.*, 1990; Kessler *et al.*, 1996) had demonstrated the importance of the phenomenon in the USA. Comparative international studies including different European and North American sites also showed a strong association between mental health problems and substance use disorders (Merikangas *et al.*, 1998). Approximately one in three people with major mental health problems seemed to have co-occurring substance misuse disorders and similar proportions were observed for people with drug and alcohol misuse who also suffered from major psychiatric illnesses. Seemingly, dual diagnosis was the norm, not the exception.

It was soon demonstrated that people with dual diagnosis fare significantly less well than those with single diagnoses in the healthcare system (Mueser *et al.*, 1998). They have higher rates of relapse and hospital use in general; they are less compliant to treatment, more violent and suicidal; and they suffer important financial and legal difficulties, family problems; and are particularly vulnerable to other health risks, such as HIV/AIDS and hepatitis.

Although individual vulnerability factors play an important role with regard to the gravity of the condition, institutional factors can also increase the problem. Follow-up studies within the healthcare system underline the low success rate of traditional health services where people with dual diagnosis are concerned (Cuffel and Chase, 1994; Bartels *et al.*, 1995; Kozaric-Kovacic *et al.*, 1995; Drake *et al.*, 1998). The main traditional treatment approaches are described as being either *sequential*, with the psychiatric disorder being treated before or after the substance abuse disorder, or *parallel*, with treatment being coordinated simultaneously in different settings. However, paradigm clashes, disagreement on treatment priority and poor co-ordination between the different treatment services result in people with dual diagnosis tending not to find their place in either system, with the result that both their health problem

and the social, psychological and physical disabilities that come with it become chronic.

Integrated service provision for people with dual diagnosis - i.e. comprehensive care where both disorders are treated at the same time by the same team – has since become the basis for major policy decisions in several countries (SAMHSA, 1997, 1998; DH, 2002). For practical reasons, this generally tends to involve integrating substance abuse treatment strategies into existing community mental health services. However, it is clear that the different models of care – sequential, parallel and integrated - often co-exist, with little being known about what actually works and for whom (Drake *et al.*, 1998). Furthermore, no standard instrument exists for describing social and health care systems and pathways through care for people with comorbidities, thus allowing comparisons between systems in different areas or in different national contexts.

New treatment models were created – as a general rule based on 'global' or 'comprehensive' patient-centred care approaches. The cost of such comprehensive care models is not insignificant. For Mueser *et al.* (1998), costing should take into account, as well as traditional pharmacotherapy, assertive outreach, motivational interventions for people who do not consider either the drug or alcohol issue or the psychiatric disorder as a problem, shared decision-making, progressive treatment engagement strategies (step-by-step models), social welfare including housing and psychosocial rehabilitation including family therapy. This challenge is complicated even further by service delivery infrastructures often not corresponding to the geographical dispersal of the client group in question, added to the lack of specialised training opportunities for staff or of staff interest in such training, problems in continuity of care with other health providers as well as stigmatisation issues in the wider community (Larson *et al.*, 1993).

The sociological issues

From a sociological point of view, the emergence of a new diagnostic category in the field of mental health is a significant event. No matter what progress may have taken place in our knowledge of neuropsychiatric or psychogenetic functioning, different societies declare their members to be ill or disabled in different circumstances and according to specific symptom patterns (Parsons, 1951). Dyslexia for example appeared as a specific diagnostic category only when the inability to read became a major social handicap. If some new technological event makes the need to be able to read obsolete, dyslexia could well become a thing of the past. New illnesses and new diagnostic categories – particularly on such a large scale - are a significant sociological event and the dual diagnosis phenomenon is no exception to this rule.

On an individual level, the relationship between the client's problem, the doctor's diagnosis, the perception of needs by both parties, their request for services and corresponding service provision can be particularly complex, and the mental health area is no exception to this rule. As Brewin *et al.* (1987) and Thornicroft *et al.* (1992) argue, needs require an object. Having a mental

health problem does not necessarily imply either the perception or even the existence of a mental health need, particularly if no adapted treatment or intervention exists to help with the problem. Furthermore, offer can create demand, services can be full of clients who are not necessarily getting what they either need or want. Provider and client estimations of need do not necessarily coincide – indeed, in the areas of mental health and substance abuse, they are often poles apart.

The key issue concerns determining not only the diagnosis but also what client needs actually are. In general, our knowledge of needs is informed by epidemiological statistics on prevalence, morbidity, mortality, disability, known risk factors such as gender, social class, social trauma (war, accidents, displacement of populations) and, of course, service use (Kovess *et al.*, 2001). Although these general measures allow general comparisons, in practical terms, client-need estimation in areas such as mental health and drug use is delicate. This is for a number of reasons. Firstly, institutional inertia often results in representations of client needs that no longer correspond to rapidly evolving client situations. Furthermore, the needs of many vulnerable groups - ethnic communities, illegal drug users and the homeless are well-known examples - are particularly difficult to evaluate. Clients avoid both carers and researchers or simply do not divulge the information and providers do not necessarily know how to ask the right question. The third reason is that subjective measures of need do not necessarily correspond either to the more objective epidemiological measures of need or to a particular society's capacity or wish to address certain issues. Finally, the definition of need itself and the distance allowed between what a certain social group might need and what they allow themselves to express a wish for depends largely on social and political factors. Stigma plays a major role.

The need with regard to the needs/services nexus for policy that takes into account both points of view - not only that of the provider but also the client's or the significant other perspective - is increasingly evident. In the field of general mental health, instruments - such as the *Needs For Care Assessment Schedule* (see Brewin *et al.*, 1987) - that integrate different stakeholder opinions in evaluating needs for care at the level of the individual have been developed since the 1970s.

Although service provision and individual needs issues are clearly influenced by psychosocial and not only medical or care provision factors, other large-scale sociological issues must also be taken into account. In certain developed countries such as France, for example, how can we explain the fact that 'dual diagnosis' as a diagnostic category and as a healthcare policy issue simply does not exist? Unlike in the US and the UK, neither the sudden appearance of a new population, nor the extensive putting into question of models of healthcare provision seems to have taken place. Should we conclude that Anglo-Saxon psychiatry is simply miles ahead of conservative French psychiatry, bogged down in old-fashioned psychodynamic debates and out of touch with everyday reality? Or is there some cultural or geographical specificity – such as lower prevalence of drug and alcohol misuse disorders, more effective prevention or a traditional comprehensive

healthcare model – that has resulted in the fact that the population of people with ‘dual diagnosis’ are fewer in number or have been more successfully integrated into the care system from the outset and therefore have been creating less of a public health problem?

There is no easy answer to these questions. However with regard to mental healthcare provision in the UK, Canada and the USA, there is one major historical difference in France that may help us shed new light on the entire dual diagnosis issue. It concerns the phenomenon of de-institutionalisation.

The impact of de-institutionalisation

The major evolution of mentalities towards the acceptance of people with mental health problems in the community and the recognition of their rights as citizens was initiated throughout the developed world in the 1960s with the critique of institutional psychiatry (Goffman (USA) 1961, Foucault (France) 1961, Cooper (UK) 1967, and Basaglia (Italy) 1968) and in the context of the commercialisation of the first major neuroleptic drugs. Psychiatrists, social scientists and philosophers revolutionised models of care provision and took the first steps towards dismantling 150 years of mental health care that had been based on taking people with mental health problems out of the community and according them asylum in large institutions where they were to be, in theory, protected from harm, from harming others or from harming themselves.

Eventually, the 1960s saw the public affirmation of civil rights as a general principle, with the fight against racial segregation beginning to be extended to other socially excluded groups. Freedom was the word. In US psychiatry, the Joint Commission on Mental Illness and Health in 1955 recommending community alternatives to state hospitals progressively led to the Mental Retardation Facilities and Community Mental Health Centers Construction Act (1963), which facilitated staffing of the new community services. A good example of the new rights for people with mental health problems was the recognition of the right to work, with the generalisation of the sheltered workshop models throughout the developed world.

Radical opposition to the entire mental health care system, embodied by the anti-psychiatry movement, was further legitimated through the participation in the anti-asylum movement of ex-mental patients themselves (Dain, 1989). By the early 1980s, as the ‘Care in the Community’ movement progressed throughout the Western world, many huge asylums had almost entirely been closed down - in the US, for example, the 550,000 beds in the state hospital system in 1955 had dropped to 140 000 in 1982 and to under 100,000 in 1990 (Redick *et al.*, 1994). Although two out of three discharged mental patients returned to their families (Minkoff, 1987), the remaining third integrated the community with varying levels of success. ‘Normalisation’, ‘social skills learning’, ‘rehabilitation’ and ‘psychosocial re-adaptation’ had become catchwords, with the aim of combating years of institutionalisation of the mentally ill, not only in users but also in personnel.

Then, in the 1990s, programmes for assertive community treatment of people with major mental illness began to appear, with the explicit aim of keeping people out of the hospitals and preventing desocialisation at all costs. Economic considerations also played an important role: a good example being the restructuring in the US of mental health services under the managed care system, which further reinforced assertive home care in order to reduce hospital costs (McLean, 2000).

The arrival of hundreds of thousands of formerly institutionalised people, generally under medication, into the general community in the 1970s, coincided with the explosion of illegal drug use and trade in the Western World. Substance misuse among people with severe mental illness, quickly associated with growing rates of homelessness, became one of the major issues of the post-institutional era (Bachrach, 1984; Minkoff, 1987). At the beginning of the 1980s, the Epidemiologic Catchment Area (ECA) study in the US showed that the number of people with co-occurring substance misuse and mental disorders had risen well over the million mark (Regier *et al.*, 1990). The de-institutionalisation movement seemed to have indirectly created a generation of socially excluded psychiatric patients with a high prevalence of alcohol and drug abuse. It was in this period that the term 'dual diagnosis' – coinciding with new DSM-III rules allowing concurrent diagnoses - took on its present meaning.

In France, the development of alternatives to hospitalisation for large sections of the asylum populations had begun somewhat earlier. The critique of large psychiatric hospitals reached a first peak as the country came out of the Second World War in 1945 to discover with horror that some 30% of patients had died of starvation or starvation-related diseases (Lafont, 2000). Groups of families created small-scale de-medicalised residential homes on an associative basis with the result that, by the 1960s, the vast majority of people with intellectual disabilities, for example, were no longer living in asylum contexts. New, smaller experimental institutional models were being tested, such as Jean Oury's famous *Clinique La Borde*.

March 1960 saw legislation creating out-patient community mental health services across the country, with massive programmes of recruitment and training of community teams throughout that decade. However a peculiarity of the French mental healthcare system – and this may be the key difference with regard to the dual diagnosis phenomenon in the Anglo-Saxon countries - is that the creation of this extensive service provision in the community did not immediately coincide with the closing down of the asylums. Although no new hospitals were created – even in the context of massive urban and population growth in the “*trente années glorieuses*” of economic expansion following the war – the old asylums took decades to diminish in size. Still today, in 2005, although the number of beds has considerably diminished, very few of these old hospitals have actually been completely closed.

Thus, the explosion of social problems related to substance misuse in the 1970s and 1980s (a) did not coincide with the sudden arrival of large numbers of people with mental health problems or intellectual difficulties into the community and (b) did coincide with an enormous increase in community out-

patient service provision, often including drug misuse treatment centres. Added to the general policy of healthcare accessible to all – and basically free of charge for clients with psychiatric or substance misuse problems – the problem of a large population of chronically disruptive patients with concurrent mental health and substance misuse disorders and often homeless, although an issue, has simply not reached the same proportions as in other developed countries. This has resulted in the almost total absence of any sort of public policy on dual diagnosis. The notion of dual diagnosis in the Anglo-Saxon meaning of the term simply does not exist, and its literal equivalent, '*comorbidité*' refers to any concurrent diagnostic of any sort. Seemingly, dual diagnosis as a diagnostic category and a public health issue is – to a certain degree – a social construction.

User perspectives and user organisations

A more detailed understanding of user perspectives on dual diagnosis may well be another way of helping us understand the complexity of the sociological underpinnings of the dual diagnosis phenomenon.

People set up user groups or finance users to set up groups for a number of reasons. The example of the intellectual disabilities movement in France is exemplary. In order to protect their intellectually disabled family members from the eugenicist policies of the fascist period and the horrors of the psychiatric asylum system during the Second World War, groups of families across the country fought for community and government support to create collective living and sheltered workshop structures within the community. The subsequent federation of these family-run associative structures has since become the *Union Nationale d'Amis et de Proches des Personnes handicapées mentales* (UNAPEI, www.unapei.org), the major national provider of support and care for people with intellectual disabilities.

A second sort of user movement is exemplified by the organisations that grew up in the 1980s in the fight against HIV/AIDS. The conservative French care system was confronted with an unknown new epidemic that was rapidly spreading in relatively unacceptable social groups such as illegal drug users and homosexuals. User groups such as AIDES (www.aides.org), AIDS Coalition to Unleash Power (ACT-UP) or *Auto-support et reduction des risques parmi les usagers de drogues* (ASUD) (www.asud.org) rapidly got together to defend not only their right to care and to information about care, but also their rights as citizens within the care system and the community. Patients' rights that had previously met with polite lip service were reinforced. Patient participation in healthcare decisions, access to medical records and improved quality and accreditation systems became the rule. The critique of medical paternalism was at its height. By the end of the twentieth century, countless other user organisations had sprung up with regard to other patient groups, whether they are victims of other illnesses or of the healthcare system itself.

However, these two major forms of user organisations - family organisations that set up alternative social or health care and user organisations defending

their personal interests – are not the only ones. Many other interest groups also seek to influence the care system by creating or supporting user groups. A recent major trend, for example, is for pharmaceutical companies to seek to influence user discourse by financing or even creating user organisations. Companies have understood that informed patients demanding higher quality care are more likely to influence health authority decisions on accessing new medications. Similarly, the recent tendency for user groups in psychiatry to criticise for example major commercial products such as anti-depressants or new anti-psychotic drugs can be countered by other user groups, certainly with less legitimacy due to being influenced by ambiguous funding sources, but nonetheless effective, through being able to afford better communication campaigns. The recruitment by French pharmaceutical companies of experts on patient information from the user movements is another major trend in this direction.

Governments or political groups, too, can seek to support user groups to gain legitimacy with regard either to the general public or external financiers. In the heat of the lawsuits by the principal South African HIV/AIDS advocacy group, *Treatment Action Campaign* (TAC), against the South African National Government, the Health Ministry financed its own *People with Aids Coalition* in an attempt to discredit TAC. Similarly, the role of the Committees of People with HIV/AIDS created by the Vietnamese health authorities is particularly ambiguous in a context of international pressure to fund treatment only if community-based organisations are seen to be having a say in the provision of care. Fortunately, these strategies are not always as ethically ambiguous as in the two examples given above. Often, the best way for public policy-makers to clean up health problems in difficult-to-access social groups is simply to help the groups create community-based organisations and then to fund the organisations. This is a proven and cost-effective strategy for dealing with difficult-to-access problems in an ethical way.

The third major interest group that is playing an increasingly complex role in supporting or promoting user groups is healthcare providers themselves. The traditional role of the carer as advocate for the sick forms the basis for policy decisions by important professional associations seeking to integrate user participation. Major popular French Non-Governmental Organisations (NGOs) such as the *Association française contre les myopathies* [French Myopathy Association] or the *Ligue nationale de lutte contre le cancer* [National Cancer League] are largely controlled by doctors and researchers who use the patients' image to collect funds for research, but with few patients actually on the decision-making committees. Similarly, in the US, managed care businesses set up and fund patient groups to educate new patients on how to optimise healthcare use. All of these strategies are particularly delicate in sensitive areas such as mental illness or drug use, where users do not necessarily have full civic rights and are therefore particularly vulnerable to manipulation. It is for this reason that, in France for example, membership of the *Fédération nationale des Associations d'(ex)Patients en Psychiatrie* [Federation of Associations of Users and Ex-users of Psychiatry] (see www.fnappsy.org) is limited to groups in which users have the controlling vote.

Two other stakeholder groups must also be mentioned. The first concerns low threshold charities and religious groups that find themselves providing long-term support (food, housing, etc.) to particularly stigmatised social groups and, as a consequence, being solicited to represent the social groups in question in negotiations with health or community authorities. The second, far more ambiguous as will be seen below, are sects or religious groups that seeks to recruit socially vulnerable individuals by 'saving them', i.e. by providing care, shelter and social support on the one hand and by promising 'recovery' and a 'new life' on the other. Both of these stakeholder groups are particularly common in the areas of mental health and substance misuse.

The legitimacy of user organisations, their ability to speak freely in representing user points of view, is directly proportional to user control of the organisation. In France, as has already been noted with regard to care provider membership, the FNAP-PSY is particularly vigilant in determining which user associations fit the legitimacy criteria necessary to be eligible for membership. Considerable problems have been encountered in determining the eligibility of certain user groups heavily funded by drug companies, and both the FNAP-PSY and the National Drug User Association (ASUD) have experienced infiltration attempts or been obliged to take harsh positions with regard to sect-based groups.

The delicate position of many mental health service users and drug users with regard to the legal system is a major obstacle, resulting in both groups being reticent to choose the more assertive tactics used by other NGOs. Both avoid public manifestations through fear of the law, and, for credibility reasons, depend heavily on alliances with other user or professional organisations. However, things are changing. Whereas drug users in France have been 'represented' for decades by drug addiction service providers, the *Agence Nationale d'Accréditation et d'Évaluation en Santé* [National Health Evaluation and Accreditation Agency] (ANAES) (see www.anaes.fr), when creating in June 2004 the best practice guidance for substitution treatment, was particularly surprised to discover that the drug users' associations (ASUD, ACT-UP) had a point of view on the question that did not necessarily coincide with that of the 'experts' in the area. The associations produced a 12-point document demanding a wider choice of substitution products, different galenic forms (smokable, injectable, inhalable...), patient participation in controlling dosages, the taking into account of notions of pleasure and comfort, the possibility to alternate products to reduce the risk of too great a chemical dependence on just one product, patient education programmes on living with drugs and substitution treatment, increased offer of abstinence programmes, continuity of care in prison, greater use of blood drug concentration measures in controlling substitution dosages, and longer prescription periods to allow substitution users to take longer holidays, etc. In other words, expertise in drug (mis)use and treatment had taken a significant step towards democratisation.

The non-existence of dual diagnosis user organisations in France

If user organisations exist for drug users on the one hand and for people with mental health problems on the other, it might seem logical that similar organisations for people with dual diagnosis would be the next step. Would it not be in the interest of people "living with dual diagnosis" to create organisations to defend their interests and their point of view on the world to the same extent as, say, "people living with HIV/AIDS" have been able to? Is there a shared user point of view on dual diagnosis?

The answer to these questions is complex. As we have noted above, users of the health system create user organisations because they share the same problems, either with the illness itself, the disabilities it brings with it, or the health and social services provided. The creation of dual diagnosis user organisations would depend on:

- The reality of a common interest group.
- The capacity of people with dual diagnosis to defend themselves or, if not, their capacity to generate support from friends, family or advocacy groups.
- The existence of 'dual diagnosis' public policy, the making of which users would need to be involved in, and which they could continue to contribute to or criticise.
- The existence of dual diagnosis services.
- The interests of charity or private organisations or indeed sects that invest no-man's land areas of defenceless or 'undefendable' minorities.

In France, where the notion of dual diagnosis does not exist, no such user group exists. Although drug user organisations recognise the importance of mental health care for their members, they do not appear to do anything actively for them. ASUD, for example, has never had a sub-group of drug users with mental health problems nor has it ever run mental health workshops for members. Similarly, FNAP-PSY seems to keep its distance from the major drug or alcohol user organisations, preferring to refer members to these other organisations rather than create specific programmes on this subject. Both organisations stress the difficulty of creating strong user groups in their own area, let alone compounding this difficulty by adding yet another reason for social exclusion. Fear of the police, fear of discrimination, internalised stigma, and organisational problems due to members being sometimes dysfunctional or unwell mean that the disadvantages of going public often outweigh the advantages. With comorbidity like dual diagnosis, the problem becomes exponential.

However, in France, the lack of any epidemiological data on the prevalence of dual diagnosis and the quasi non-existence of dual diagnosis as a recognised psychiatric diagnostic category leaves us with the lingering doubt that the lack of user organisations for people with dual diagnosis might simply be explained by the lack of people with dual diagnosis. Elsewhere, in countries like the US where the epidemiological reality has been clearly demonstrated and where the notion of dual diagnosis has both a clinical and an institutional history, albeit a short one, what has become of the voice of people with dual diagnosis? Do user groups exist and, if so, to what extent do these user

groups reflect the point of view of the people concerned – and not the point of view of other interest groups?

Dual diagnosis self-help groups in the US

At first glance, the response to these questions seems obvious. The Internet, for example, thrives with examples of American dual diagnosis self-help groups using the classic model of Alcoholics Anonymous (AA) - Double Trouble in Recovery (<http://www.doubletroubleinrecovery.org>), Dual Disorders Anonymous (<http://www.dualdisordersanonymous.com>), Dual Diagnosis Anonymous, (<http://www.soberdykes.org/dda.html>), Dual Recovery Anonymous (<http://draonline.org>, www.dualrecovery.org), Everyone's Recovery Groups (<http://www.dualdiagnosisfriendly.org/erg.html>), Dual Diagnosis Recovery Network (<http://dualdiagnosis.org>)

In other words, these are groups based on the idea that

- People dependant on a product are dysfunctional in that they are unable to control their problem by themselves.
- They have to admit that they have lost control over their lives.
- There is a higher power (for example, God) that can help them.
- They must abandon their current way of handling the world and hand things over to this higher power.
- In this way, they can attain recovery (abstinence from the product, good mental health and quality of life).

Alcoholics Anonymous, created in the 1930s, has a long history of generating similar 'recovery groups' with regard to other disorders, Narcotics Anonymous, launched in 1947, being one of the best-known examples. It is thus not surprising that the same mechanism has been widely developed with regard to dual diagnosis sufferers. Central to the AA-style philosophy are the famous Twelve Steps and the notion of a fellowship working together towards recovery. All of these notions are directly adopted from an evangelical Christian organisation known as the Oxford Group, who developed and promoted them as a means to escape from a life of sin (Bufe, 1991; B, 1998). The fellowship is modelled on the twelve apostles: a self-help group with common beliefs and aims and an evangelical mission. The recovery movement uses these same notions in the fight not against sin, but against addiction and, with the advent of dual diagnosis self-help groups, as a model for recovery from mental health problems.

In the US context, where religious organisations are major actors in social support for the poor, the hungry and the homeless, it is not surprising that many of these dual diagnosis self-help groups not only adopt faith-based strategies, but also use church support in more material ways. The Dual Recovery Anonymous website (<http://www.dualrecovery.org>), for example, describes their historical roots in Kansas City in 1989 as being formed "out of a vision for both dual recovery and a fellowship to carry the message. The first DRA meeting is held in a church setting, the second in a mental health facility".

The self-help model in these cases is also strongly influenced by the American socio-economic context where most people from socially excluded, stigmatised groups such as people with alcohol or drug problems and people with major mental health problems do not have easy access to healthcare, doctors or treatment, and where those that do are generally confronted with a 'managed care' system, where the health insurer is at the same time the healthcare provider. From both an individual point of view and a managed care or public health point of view, the AA self-help approach is highly economical – and indeed produces results if, of course, you are in a community context where

- It is acceptable to believe in 'higher powers'.
- You are part of a social network whose members will remind you that the higher power and his/her allies are watching over you to encourage you in your new-found sobriety/sanity and to help you from relapsing.
- You will be encouraged and helped to help others help themselves.
- Moral and health proselytism is socially acceptable.

From a sociological point of view, it is particularly fascinating that, even in those strategies that do not refer directly to 'God' or the 'Higher Power' as a projected, external locus of control, almost all of the principle themes of these recovery models have long religious histories: abstinence, will, faith, relapse, observance, making amends, new awakening, ... Their adoption by the health system in the American socio-economic context, although in no way specific to dual diagnosis, is striking.

Max Weber's link between the Protestant work ethic and the spirit of capitalism (Weber, 1920) has rarely been so clearly illustrated as in the progressive adaptation of AA's terminology to other health fields. Hamilton's, comparison, for example, of the texts of the different dual diagnosis self-help groups, is exemplary (Hamilton, 2004). In the 12-step programme, Step number 5, for example, affirms the principle of the person with dual diagnosis recognising and confessing his or her difficult past. For the more overtly faith-based groups such as *Double Trouble in Recovery* or *Dual Diagnosis Anonymous*, this step explicitly refers to religious and moral values: "[We have] admitted to God, to ourselves, and to another human being the exact nature of our wrongs". By contrast, for the *Dual Recovery Anonymous* network, Step 5 is deftly translated into the values of both new-age spiritualism and simplistic free market ideologies: "[We have] admitted to our Higher Power, to ourselves, and to another human being, the exact nature of our liabilities and our assets". In the first case, we are admitting that we have sinned and, in the second, that we have been dilapidating our (health) capital. Both assert that we have lost control over something that some higher power knows how to control if we would only surrender our power over to them.

Thus, the ideological bases of these groups - the arguments being used to convince people to engage in a plan of action with regard to their two illnesses - are social values that reflect certain fundamental, consensual trends in American society. Such models of course would be impossible in social contexts where either admitting that there is a higher power that has a direct influence on everyday life or determining moral value in economic terms might

be socially unacceptable – which is largely the case in young, contemporary Europe and increasingly so in different sub-populations in the US.

In fact, the AA style of therapeutic discourse is so close to certain mainstream ideologies of religious, judicial and economic power, that the question arises as to which institutional power bases are, in reality, behind the self-help groups that resort to it. AA's long history and proactive recruitment strategies have resulted in important links being created with both mental health and correctional services, with AA, NA and a number of the dual diagnosis anonymous networks being part of voluntary or mandatory rehabilitation package (Hull, 1999). It is thus not surprising to discover that, on closer observation, many of these self-proclaimed dual diagnosis self-help groups reveal themselves to be in reality non-statutory service providers working as often as not as partners of managed care organisations and statutory mental health or correctional services.

Critiques of these religious-based therapeutic approaches have been growing in recent years. Trimpey (1989) accuses AA of undermining the empowerment of individual participants by transferring dependence on alcohol to dependence on the AA fellowship group. According to this theory, the AA approach is exploiting dependency to create new dependencies – not unlike the functioning of a sect. Similarly, James Christopher, the founder of a secular alternative to AA known as SOS (*Save Our Selves* or *Secular Organisation for Sobriety*), is quoted as describing his personal experience as having gone “from seventeen years of a fearful and guilty alcoholism to a fearful and guilty sobriety with Alcoholics Anonymous” and asserts the need for an approach that “credits the individual for achieving and maintaining his or her own sobriety, without reliance on any Higher Power” (Christopher, 1988).

In other words, the self-help model is not necessarily the sign of a healthy user-run organisation. In the US, it often reveals itself either to be a sales argument - strongly linked to the specific ‘*God helps those who help themselves*’ societal values characteristic of Max Weber's Protestant ethic – or else a hopefully sustainable public health strategy in a national context where there is no universal public health coverage. This public health approach is often that of mental health service providers who use the same or similar self-help models as cost-effective therapeutic strategies, typically in rural areas where outpatient services are not necessarily easily accessible for consumers. The STEMSS (Support Together for Emotional/Mental Serenity and Sobriety) model, for example, is a participative, psycho-educational intervention that focuses on the interaction between addictive and mental disorders and uses a step-by-step approach similar to the AA model (Osterstrom, 1994). Based on using professionals to encourage and facilitate peer leadership of self-help meetings, STEMSS prides itself on needing ‘little - if any - institutional funding, and [being] self-sufficient with minimal support from local resources’ (Bricker, 1989). Indeed, the objective is that groups initiated in inpatient contexts aim to become progressively independent of professional support.

Conclusions

In conclusion, there is little convincing evidence of the existence either of needs analyses that have taken into account users' points of view, or of independent organisations run by people with dual diagnosis themselves and expressing their point of view on what they perceive their problems to be and what they consider the best solutions to these problems to be. This is so even in the US context, where the phenomenon has been receiving considerable attention for over twenty years. This is further reinforced by the apparent absence of a number of policy positions that are characteristic of true user-controlled organisations, such as the right to refuse care, the right to information concerning benefits, risks and alternative care, the right to decent living conditions and, for drug-user organisations, the right to a greater diversity of substitution treatments and the right to take into account comfort and pleasure in prescribing treatment. The great majority of organisations claiming to defend the interests of this population and promoting self-help philosophies are in fact philanthropic or church-based organisations defending the socially excluded, or care providers defending potential care consumers' rights to access care, the importance of motivational techniques and the ideal of recovery.

A difficult population in need of care seems to have been identified in the latter part of the twentieth century in certain parts of the developed world. The need in question has been determined by care providers and public health authorities, but not by the people directly concerned by the phenomenon. It is not the objective of the current paper to question the value of dual diagnosis as a diagnostic category.

However, from a 'user/client/consumer' point of view, there is little evidence to suggest that 'people with dual diagnosis' form a coherent social group based on a set of common interests that are sufficiently specific to create cohesion. The distances are enormous between the depressed alcoholic, the cannabis user with psychotic symptoms and the crack addict with a personality disorder. Not all of them – and this is even truer in societal contexts with more inclusive health insurance and social welfare schemes such as may well be the case in France - correspond to the general image associated with the 'dual diagnosis population' of being homeless, helpless, violent, suicidal, on the streets, misusing the care system and victims of insufficiently prepared de-institutionalisation.

In short, it seems likely that the notion of 'people with dual diagnosis' as we use it today is to a large degree a social construction describing a population group subjected to particular strategies of care or non-care and having to live with the consequences of these strategies, rather than a coherent psychiatric diagnostic category based on a closely defined set of symptoms and aetiologies.

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Chapter 6 Gender differences in the prevalence of psychiatric morbidity among opiate users: a European perspective

G P Gilchrist

Overview

This chapter reviews the European literature on the prevalence of comorbidity among opiate users, considers the factors associated with psychiatric morbidity among drug users, and highlights the clinical implications of these findings. Studies conducted among primarily opiate using populations in and out of treatment are discussed, although most drug users reported polysubstance use and dependence. While studies on comorbidity among drug users have been undertaken in Europe, those that have not presented findings by gender have been excluded from this chapter. The majority of literature on psychiatric morbidity among opiate users has been conducted in the US and Australia. Therefore, where European literature was unavailable for some sections of this chapter, studies from US and Australia have been considered. It is possible that research has been undertaken in Europe and published in non-English language publications, however this review was limited to English language publications. The review of the literature is not exhaustive and concentrates on studies examining the prevalence of anxiety and mood disorders. Findings from the studies among drug users are summarised in tables at the end of this chapter.

Methodological considerations

There are some methodological issues to be considered when attempting to compare findings across studies. Most importantly, criteria for the diagnosis of psychiatric disorder and substance misuse differ, as does the time of assessment (e.g. entering treatment, during treatment etc.) and the time frame covered in the assessment (e.g. lifetime prevalence, 1-month prevalence, 6-month prevalence etc.) (Brooner *et al.*, 1997). Many studies among substance abusers diagnose psychiatric disorders early in treatment or on entering treatment, when withdrawal symptoms or acute intoxication may result in high levels of anxiety and depression (Verheul *et al.* (US), 2000). Furthermore, it has been argued that “many drugs cause psychiatric symptoms which do not persist as disorders” (Crawford *et al.*, 2003:2).

Random sampling methods were used to recruit male drug dependent prisoners in one study in this chapter (Kokkevi and Stefanis (Greece), 1995). Such methods were not commonplace among studies of drug users. Rather, convenience sampling methods were used including consecutive admissions (Hendriks (Netherlands), 1990; Kokkevi and Stefanis (Greece), 1995; Marsden *et al.* (England), 2000) and advertising for participants (Darke *et al.* (Australia), 1994; Darke and Ross (Australia), 1997). Furthermore, assessments were undertaken at different times during drug treatment from initial assessment (Hendriks (Netherlands), 1990; Marsden *et al.* (England),

2000) to during treatment (Darke *et al.* (Australia), 1994; Darke and Ross (Australia), 1997). For some studies the length of time the participants had been in treatment was not given (Krausz *et al.* (Germany), 1998; Brienza *et al.* (US), 2000).

Similarly, comparison of the prevalence of sexual abuse across studies is problematic. Firstly, the definitions of abuse and 'childhood' vary across studies. Therefore, the variations in rates across studies and countries may not represent variation in true prevalence but may be explained by such methodological considerations (Peters *et al.*, 1986).

Therefore this chapter is not able to compare the prevalence of psychiatric morbidity by gender across Europe. Patterns of gender differences in the prevalence of comorbidity among opiate users and risk factors associated with psychiatric morbidity will be discussed to enhance assessment, detection and management of comorbidity among drug users in practice.

Prevalence of comorbid drug and psychiatric disorders

Representative community samples

Studies of representative community samples have found a relationship between drug use, dependence and psychiatric morbidity. In Europe, two large representative community studies have recently been undertaken; the Netherlands Mental Health Survey and Incidence Study (Bijl *et al.*, 1998) and the UK Psychiatric Morbidity Study among adults living in private households (Singleton *et al.*, 2001). These studies found that while anxiety and mood disorders were higher among females, drug use and dependence were higher among males. One percent of both males and females in the Netherlands met criteria for 12-month mood + anxiety + substance use disorder. Substance use disorder was more likely to be comorbid with a mood disorder than a pure disorder among females (de Graaf *et al.*, 2002). In the UK, 12% of males and 6% of females had any drug dependence and any current neurotic disorder. People who reported a significant level of neurotic symptoms in the UK study were three times more likely to be drug dependent, and people who reported a level of neurotic symptoms likely to need treatment were over four times more likely to be drug dependent. Higher total current neurotic symptom scores were associated with a greater likelihood of drug dependence (Coulthard *et al.*, 2002).

Studies among drug users

Of the studies reviewed, the prevalence of psychiatric disorder was consistently higher among female opiate users than among male opiate users. The prevalence of psychiatric disorder among drug users was higher than among representative community samples.

In Germany, the 6-month prevalence of non-substance abuse psychiatric disorders was greater among female (46%) than male (31%) opiate users in regular contact with treatment services after one year (Krausz *et al.*, 1998).

Furthermore, female drug users met criteria for significantly more diagnoses than male drug users. Among consecutive admissions to a clinical detoxification centre in the Netherlands (Hendriks, 1990), a significantly greater proportion of female (73%) than male (45%) opiate users met criteria for 6-month non-substance Axis I disorder. However, male drug users were eleven times more likely to have an anxiety-related disorder if they had a depressive disorder, while females were only twice as likely. The prevalence of current depression in an Australian study of heroin injectors was significantly higher among female than male drug users (37% vs. 25%, Darke and Ross, 1997). Among new clients entering treatment in the National Treatment Outcome Research Study in England, females were twice as likely as males to report anxiety (32% vs. 17%), depression (30% vs. 15%), paranoia (27% vs. 17%) and psychoticism (33% vs. 20%) in the previous 90 days (Marsden *et al.*, 2000). Other Australian studies that examined psychiatric 'caseness' reported similar results with between 61% (Darke *et al.*, 1994) to 75% (Darke *et al.*, 1992) of females and between 49% (Darke *et al.*, 1992) to 56% (Darke *et al.*, 1994) of males meeting the threshold for a current psychiatric case.

Therefore regardless of the methods used to assess psychiatric disorder among opiate users and the stage of treatment, female opiate users consistently met criteria for psychiatric disorders and symptoms more frequently than male opiate users.

Predictors of psychiatric morbidity among opiate users

Among opiate users receiving or seeking treatment, polysubstance use, poor physical health, previous psychiatric treatment, relationship problems, housing problems, legal problems and being female were among the predictors of psychiatric symptoms (Darke *et al.* (Australia), 1994; Marsden *et al.* (England), 2000). The English National Treatment Outcome Research Study found that psychiatric symptoms were more prevalent among opiate users who frequently used benzodiazepines, alcohol and stimulants. Clients who frequently used stimulants reported the highest overall distress levels for anxiety (Marsden *et al.*, 2000).

Both polydrug use and dependence on benzodiazepines have been associated with greater psychiatric comorbidity among drug users (Darke *et al.* (Australia), 1994; Brooner *et al.* (US), 1997; Darke and Ross (Australia), 1997; Marsden *et al.* (England), 2000). The significant association between illicit tranquilliser use and neurotic disorder may be an attempt to self-medicate neurotic symptoms. Moreover, research has shown that female drug users were more likely to use drugs to alleviate psychological distress than male drug users (Chatham *et al.* (US), 1999).

Prisoners

In Greece, male drug users from community treatment services were compared to male prisoners registered as drug dependent in the previous 12-

months (Kokkevi and Stefanis, 1995). Lifetime affective (32% vs. 20%, $p=0.10$) and anxiety (53% vs. 14%, $p<0.001$) disorders were more prevalent among drug users recruited from treatment services than among drug users in prison, while antisocial personality disorder was more prevalent among prisoners (76% vs. 61%, $p=0.04$). A significantly greater proportion of prisoners reported being admitted to a psychiatric hospital than those recruited from treatment services (37% vs. 15%, $p=0.002$).

A study of over 3,000 remand and sentenced prisoners in England and Wales, reported that female prisoners were significantly more likely than male prisoners to meet criteria for a neurotic disorder, and that for both sexes, remand prisoners were significantly more likely to meet criteria for neurotic symptoms and disorders than sentenced prisoners (Singleton *et al.*, 1998). Fifty-eight percent of male remand and 75% of the female remand prisoners met threshold for a current neurotic disorder, compared to 39% of the male and 62% of the female sentenced prisoners. Moreover, rates for multiple disorders were greater among remand prisoners than sentenced prisoners. Drug use is highly prevalent among the prison population, with a larger proportion of female (41% of remand and 26% of sentenced prisoners) than male prisoners (29% of remand and 21% of sentenced prisoners) had used heroin in the year before being imprisoned. In their lifetime, 44% of female remand and 27% of male remand prisoners, and 37% of female sentenced and 20% of male sentenced prisoners had attempted suicide. Furthermore, 5% of male remand, 7% of male sentenced, 9% of female remand and 10% of female sentenced prisoners had self-harmed during their current prison term. Victimization while serving a prison term was commonplace, and was greater among sentenced than remand prisoners. Thirty-four percent of male remand and 41% of female remand prisoners reported at least one type of victimization during their current prison term compared to 46% of both male and female sentenced prisoners. Prisoners who reported victimization during their current prison term were twice as likely to report significant neurotic symptoms as those prisoners who had not been victimised. A greater proportion of male remand (78%) and sentenced (64%) prisoners had a lifetime personality disorder than female prisoners (50%), while a greater proportion of female remand prisoners had a probable psychotic disorder (21%) than male remand (9%) and sentenced (4%) prisoners.

Prostitutes

In Europe, drug use is highly prevalent among female prostitutes (Gossop and Powys, (England), 1994; Bridgeville-Jensen and Sutton (Norway), 1996; Church *et al.* (UK), 2001). Physical and sexual violence from clients is common among female prostitutes (Barnard (Scotland), 1993; El-Basel *et al.* (US), 1997; Gilchrist *et al.* (Scotland), 2001). A recent UK study found 81% of street prostitutes reported physical violence from clients (Church *et al.* (UK), 2001). Despite the impact of abuse on psychiatric morbidity among drug users discussed earlier, the mental health of drug users involved in prostitution has not been widely examined. Greater proportions of female drug users than male drug users were involved in prostitution (Chatham *et al.* (US), 1999; Grella (US), 2003).

The prevalence of drug use and psychiatric morbidity between female drug users with lifetime involvement (prostitutes, $n=176$) and no involvement in prostitution (non-prostitutes, $n=89$) was examined in a recent study of female drug users recruited from three services in Glasgow (Gilchrist *et al.* (Scotland), 2005). In adulthood, 64% of prostitutes had experienced emotional abuse, 57% had experienced physical abuse and 33% had experienced sexual abuse. The odds of experiencing physical (Odds Ratio [OR] 1.8) or sexual abuse (OR 2.4) in adulthood were greater for prostitutes than non-prostitutes. Seventy-two percent of prostitutes, and 67% of non-prostitutes met criteria for a level of current neurotic symptoms likely to need treatment (Clinical Interview Schedule [CIS] ≥ 18) (Lewis and Pelosi, 1992). Fifty three percent of prostitutes had attempted suicide in their lifetime, and 72% met criteria for current depressive ideas. The odds for attempted suicide (OR 1.73) and current depressive ideas (OR 1.8) were almost twice as great among prostitutes as non-prostitutes. Using multiple logistic regression, being in foster care (OR 8.9), being prescribed medication for emotional problems in the last 30 days (OR 7.7), adult sexual abuse (OR 4.5), poly drug use in the last 30 days (OR 3.6) and adult physical abuse (OR 2.6) were significantly associated with a Clinical Interview Schedule – Revised [CIS-Rscore of ≥ 18 for prostitutes. The authors conclude that higher rates of adulthood abuse among prostitutes may explain the greater proportion of prostitutes than non-prostitutes meeting criteria for current depressive ideas and lifetime suicide attempts.

In the US, higher psychiatric symptom severity among female drug users involved in prostitution than among female drug users recruited from the same sites has been reported (El Bassel *et al.*, 1997, 2001). El-Bassel *et al.* (1997) found that higher perceived AIDS risk, rape in the last year, younger age, and Hispanic (Black and White) ethnicity were significantly associated with psychological distress among those female drug users involved in prostitution.

In a US study of 33 male and 97 female prostitutes, 68% of subjects met criteria for post traumatic stress disorder (PTSD). The severity of PTSD was related to physical abuse in childhood. PTSD severity was also related to being raped in adult prostitution, and the number of times raped in adult prostitution. It was not associated to physical assault in prostitution, or to the duration of involvement in prostitution. Furthermore, the study reported that the more types of violence experienced, the greater the severity of PTSD symptoms and the greater the likelihood of meeting criteria for a PTSD diagnosis (Farley and Barkan (US), 1998).

Prevalence and impact of sexual and physical abuse

Prevalence of childhood abuse and psychiatric disorders among representative community samples

Studies report that females were more likely than males to have been abused as children. A representative community sample in the UK found that 8% of males and 12% of females had suffered childhood sexual abuse (Baker and Duncan, 1985). Twenty-seven percent of men and 33% of women in the

Netherlands Mental Health Survey and Incidence Study reported childhood trauma (emotional neglect, psychological, physical and sexual abuse) (de Graaf *et al.*, 2002). Those who reported childhood trauma were over three times more likely to meet criteria for 12-month mood + substance use disorder (OR 3.37 95% CI 1.56-7.25), over twice as likely to meet criteria for 12-month anxiety + substance use disorder (OR 2.48, 95% CI 1.39-4.43) and over five times more likely to meet criteria for 12-month mood + anxiety + substance use disorders (OR 5.28, 95% CI 2.81-9.93) than those who had not suffered childhood trauma (de Graaf *et al.*, 2002).

Representative community studies conducted outside Europe support the association between childhood abuse and increased risk for psychiatric and drug disorders in adulthood (Helzer *et al.* (US), 1987; Silverman *et al.* (US), 1996) rather than being selectively associated with any particular syndrome (Bulik *et al.* (US), 2001).

Prevalence of childhood abuse and psychiatric disorders among drug users

Studies of sexual and physical abuse among drug users report substantially higher prevalence rates than among community samples. Similar to studies among community samples, two US studies reported that significantly greater proportions of female than male drug users had suffered childhood sexual abuse (61% vs. 13%, Grice *et al.*, 1995; 29% vs. 4%, Hien *et al.*, 2000). No gender differences have been reported in the prevalence of physical abuse in childhood (27% females vs. 19% males; Hien *et al.*, 2000). Female drug users reported more lifetime physical abuse (30% vs. 6%, Brown *et al.* (US), 1995), sexual abuse (25% vs. 4%, Brown *et al.* (US), 1995; 69% vs. 17%, Grice *et al.* (US), 1995) and domestic violence (41% vs. 11%, Hien *et al.* (US), 2000) than male drug users.

Research has demonstrated that drug users who have experienced abuse have poorer psychological functioning, significantly more anxiety disorders, suicide attempts, self-harming behaviour, and eating disorders (Grice *et al.* (US), 1995; Jarvis and Copeland (Australia), 1997; Kang *et al.* (US), 1999).

Attempted and completed suicide among drug users

Attempted suicide among drug users

Research shows that suicidal thoughts (25% female vs. 17% male, Marsden *et al.* (England), 2000) and attempted suicide are highly prevalent among both male and female drug users in Europe (37% females vs. 30% males, Rossow and Lauritzen (Norway), 1999; 41% females vs. 36% males, Rossow and Lauritzen (Norway), 2001). One Australian study reported that females were twice as likely to have attempted suicide as males (50% vs. 31%, OR 2.2) and were twice as likely to have attempted suicide more than once (28% vs. 15%, OR 2.3). Furthermore this study reported that female drug users were 18 times more likely than male drug users to have attempted suicide before they first used heroin (69% vs. 11%) (Darke and Ross (Australia), 2001).

Completed suicide among drug users

A study in the UK reported the risk of successful suicide among drug addicts notified to the Home Office (by the National Health Service Central Register and General Register Offices for Scotland and Northern Ireland) was four times higher for male 'addicts' and eleven times higher for female 'addicts' than for the general population aged 15-54 years (Oyefeso *et al.*, 1999).

Although not all the results were presented by gender, a meta-analysis of suicide as an outcome for psychiatric disorders using nine papers from five countries, reported that people with substance misuse problems have an increased risk of completed suicide, with the suicide risk for people dependent on opiates 14 times that expected (Harris and Barraclough, 1997). The meta-analysis found that polysubstance use has one of the highest suicide risks associated with psychiatric disorder. The suicide risk for mixed drug dependence and abuse was 87 times that expected when combined with a past history of attempted suicide in females.

Predictors of attempted suicide among drug users

Among substance users, those who attempt suicide are more likely to be female, have additional psychiatric diagnoses, report adverse childhood experiences and trauma, earlier age of first intoxication and higher levels of polydrug and benzodiazepine use, recent heroin overdose and current suicidal ideation than those who had not attempted suicide (Jarvis and Copeland, (Australia) 1997; Kessler *et al.* (US), 1999; Darke and Ross (Australia), 2001; Rossow and Lauritzen (Norway), 2001, Darke *et al.* (Australia), 2004).

Treatment outcomes

Most research has demonstrated that drug users with an existing psychiatric disorder have a poorer prognosis, increased relapse rates and poorer treatment outcomes than drug users without a psychiatric disorder (Najavits *et al.*, 1997). Other studies of methadone clients have also found that those who dropped out of treatment have a higher degree of neurotic symptoms, especially depression and anxiety (Cacciola *et al.* (US), 1996; Milby *et al.* (US), 1996; Brooner *et al.* (US), 1997). Therefore it is important that psychiatric symptoms are detected and managed during treatment to enhance treatment retention and outcome. Providing mental health services, counselling and psychosocial services to methadone maintenance clients in the US has been shown to improve drug related and psychiatric outcomes (Woody *et al.* (US), 1983; McLellan *et al.* (US), 1993).

Several studies have shown that previous experience of abuse or the presence of post traumatic stress disorder were associated with greater use of emergency services among female drug users (Liebschutz *et al.* (US), 1997), greater numbers of inpatient substance abuse treatment admissions among both male and female drug users (Brown *et al.* (US), 1995) and greater

numbers of psychiatric hospital admissions among female drug users (Jarvis and Copeland (Australia), 1997).

Impact of treatment on psychiatric symptoms

Longitudinal treatment outcome studies demonstrate that psychological symptoms among dependent male and female heroin users reduce significantly after a period of stabilisation on methadone (Chatham *et al.* (US), 1999 (after 1-year); Gossop *et al.* (England), 2000 (after 1-year), 2001 (after 2-years), 2003 (after 4-5 years)). One study has reported that the course of psychiatric disorder among opiate using women in contact with drug treatment services was significantly worse than for men (Krausz *et al.* (Germany), 1998). However, it is important to highlight that while psychiatric symptoms may reduce during the course of treatment they are still highly prevalent and may require treatment.

Conclusions

In all studies among drug users, a greater proportion of female drug users consistently met criteria for psychiatric morbidity than male drug users. Among opiate users, multiple drug and psychiatric disorders were commonplace. In some studies, meeting criteria for an anxiety disorder increased the risks of meeting criteria for a depressive disorder. While there was no gender difference in the prevalence of physical abuse in childhood, female drug users were more likely to have suffered sexual abuse in childhood. Female drug users were more likely than male drug users to have experienced adulthood sexual and physical abuse and domestic violence than male drug users. A history of abuse is associated with greater psychiatric morbidity and suicidal behaviours, and worse treatment outcomes among drug users. Therefore there is a need for addiction services to screen and identify mental health problems and abuse histories in order to effectively manage psychiatric symptoms throughout treatment.

Many studies describing psychiatric morbidity among drug users have not presented analysis by gender. This may be because women are less visible in drug treatment services in some countries or because an assumption has been made that effective treatment for male drug users will also be effective for female drug users. Failure to compare outcomes and assess needs by gender does not permit valid conclusions about treatment effectiveness or treatment planning for either male or female drug users to be reached. Research should analyse findings by gender whenever sample size permits.

While drug treatment outcome studies report reductions in psychiatric symptoms for both sexes, psychiatric morbidity remains high and may require intervention.

The review of the literature has highlighted differences in the prevalence of co-existing drug and psychiatric disorders, different treatment needs and prognosis among male and female drug users. Therefore, the importance of

gender-sensitive approaches for the treatment of comorbidity should be acknowledged.

Summaries of studies cited

| Study | Measurement for psychiatric disorder | Psychiatric disorder | |
|---|---|--|-----------|
| ENGLAND Marsden <i>et al.</i> (2000) Longitudinal prospective cohort of new clients from 54 agencies representative of main treatment modalities. purposely selected (non-random sample) 1,075 drug treatment clients (21% female, n=226) Mean age 29 years (16-58) 55% regular poly drug users, 87% used heroin and 49% illicit tranquillisers in 3 months before treatment, 28% alcohol consumption > than recommended sensible limits | Maudsley Addiction Profile | More severe physical health symptoms ($\beta=0.44$; $P<0.001$); more severe dependence for the main problem substance ($\beta=0.15$; $P<0.001$); being female ($\beta=0.12$; $P<0.001$); and previous psychiatric treatment ($\beta=0.12$; $P<0.001$) predicted psychiatric symptoms | |
| | Brief Psychiatric Rating Scale | | |
| | Psychiatric disorders (males) | Psychiatric disorders (females) | |
| | 90 day prevalence of psychiatric symptoms from 4 subscales of Brief Psychiatric Rating Scale | Females were twice as likely to report each of the 4 symptoms below than males | |
| | | Odds ratio | |
| Anxiety | 17% | 32% | 2.2 |
| Depression | 15% | 30% | 2.4 |
| Paranoia | 17% | 27% | 1.8 |
| Psychoticism | 20% | 33% | 2.0 |
| Suicidal thoughts | 17% | 25% | $p=0.001$ |

| Study | Measurement for psychiatric disorder | Psychiatric disorder |
|--|---------------------------------------|---|
| NETHERLANDS Hendriks (1990) Consecutive admissions to clinical detoxification centre Instruments administered 1 st or 2 nd day after admission N=152 (20% female, n= 30) Mean age 27 years (range 16-42 years) 90% polydrug users, heroin primary drug for 70% and cocaine for 13% | Addiction Severity Index | 60% met criteria for at least one non-substance lifetime psychiatric disorder, and 51% met these criteria in the previous 6 months. |
| | Beck Depression Inventory | |
| | Symptom Check List–90 | |
| | Diagnostic Interview Schedule | Lifetime psychiatric disorders |
| | | antisocial personality 60% |
| | | major depression 37% |
| | | dysthymic disorder 35% |
| | | agoraphobia 25% |
| | | social phobia 26% |
| | | panic disorder 18% |
| | mania 5% | |
| | schizophrenia 4% | |
| | somatisation disorder 1% | |
| | Psychiatric disorders (males) | Psychiatric disorders (females) |
| | Lifetime prevalence | |
| | Obsessive compulsive disorder 7% | 33% p<0.001 |
| | Panic disorder 14% | 33% p<0.05 |
| | 6 month prevalence | |
| | Panic disorder | |
| | Any non-substance Axis 1 disorder 11% | 33% p<0.01 |
| | | 73% p<0.05 |
| | | Females were twice as likely to have an anxiety related disorder if they had depressive disorder |
| | | Males were 11 times more likely to have an anxiety related disorder if they had depressive disorder |

| Study | Measurement for psychiatric disorder | Psychiatric disorder |
|--|--|---|
| AUSTRALIA Darke et al. (1992) Research team approached clients at treatment agencies and needle exchanges to participate (non-random sample) opiate users 239 Opioid users (210 from methadone clinic) (40% female, n=96) Mean age 30 (17-45) Length of time in drug treatment not presented | General Health Questionnaire-28 (GHQ-28) | 59% reported significant psychopathology Poor health, higher levels of tranquiliser use, not being in treatment and being female was predictive of a higher GHQ-28 score |
| | Psychiatric disorders (males) | Psychiatric disorders (females) |
| | GHQ-28 score Anxiety score 6.9 Depression score 2.2 Somatic symptoms score 1.6 Social dysfunction score 1.5 Psychiatric case 49% | 11.1 3.5 2.5 2.9 2.3 75% Women were over 3 times more likely than men to meet criteria for psychiatric case (OR 3.2) |

| Study | Measurement for psychiatric disorder | Psychiatric disorder |
|--|--|--|
| <p>AUSTRALIA</p> <p>Darke <i>et al.</i> (1994)</p> <p>Participants recruited by placing notices in waiting room of methadone maintenance clinics (non random sample)</p> <p>222 methadone maintenance clients enrolled in methadone maintenance programme on average 18 months (1-44)</p> <p>Receiving mean dose of methadone 59mgs (8-165mgs)</p> <p>(40% female, n=89) Mean age 31 (18-45)</p> | <p>General Health Questionnaire-28 (GHQ-28)</p> <p>Beck Depression Inventory (BDI)</p> <p>State-Trait Anxiety Inventory (STAI)</p> | <p>58% reported psychiatric caseness (mean GHQ-28 score 8.2)</p> <p>Benzodiazepine use, poorer social functioning and poorer health were significantly associated with higher levels of personal distress</p> <p>Neither dose nor length of time in treatment were associated with levels of psychopathology</p> |
| | Psychiatric disorders (males) | Psychiatric disorders (females) |
| | <p>Mean BDI score 15.3</p> <p>Mean STAI score 45.1</p> <p>Mean GHQ-28 score 7.3</p> <p>Psychiatric case 56%</p> | <p>18.8</p> <p>50.9</p> <p>9.5</p> <p>61%</p> <p>On average, women reported significantly higher depression and anxiety scores than men</p> <p>Women were twice as likely to meet criteria for most mental disorders than men</p> |

| Study | Measurement for psychiatric disorder | Psychiatric disorder |
|---|--|--|
| AUSTRALIA Darke and Ross (1997) Non random sample – recruited by placing adverts in magazines, needle exchanges, methadone maintenance clinics and word of mouth 222 heroin injectors 51% receiving methadone maintenance. Median time in Treatment 16 months (1-56 months) (41% female, n=91) Mean age 30 years (17-50) | Composite International Diagnostic Interview | 67% met criteria for lifetime and 55% for current diagnosis of an anxiety and/ or depressive disorder No difference between those currently in treatment for drug use vs. those not currently in treatment for lifetime (43% vs. 39%) or current (29% vs. 30%) depressive disorders, or lifetime (57% vs. 62%) or current (49% vs. 52%) anxiety disorders |
| | <i>Psychiatric disorders (males)</i> | <i>Psychiatric disorders (females)</i> |
| | No gender difference in prevalence of lifetime or current anxiety disorders, or the prevalence of lifetime depressive disorder Lifetime (current) disorders Agoraphobia 22% (16%) Generalised anxiety disorder 5% (2%) Panic attacks/ agoraphobia 11% (8%) Panic attacks 7% (5%) Simple phobia 30% (23%) Social phobia 40% (30%) Any anxiety disorder 59% (49%) Dysthymia 21% (10%) Major depression 29% (21%) Any depressive disorder 36% (25%) | Significantly greater proportion of females than males met criteria for current depressive disorder Lifetime (current) disorders 21% (16%) 4% (2%) 14% (12%) 7% (4%) 38% (37%) 38% (26%) 60% (53%) 19% (10%) 39% (30%) 47% (37%) |

| Study | Measurement for psychiatric disorder | Psychiatric disorder |
|--|--|---|
| GERMANY Krausz <i>et al.</i> (1998) opiate users in treatment or in regular contact with drug advice centres (mostly methadone) no description of how sample recruited (78% of 350 recruited followed up at 1 year) 272 opiate users followed up for 1 year (31% female, n=82) mean age 30 years (17-48) Before treatment began 61% had injected drugs in the previous 30 days compared to 38% at 1 year follow up Polydrug use on 14 out of previous 30 days at initial interview | Composite International Diagnostic Interview Becks Depression Inventory Brief Psychiatric Rating Scale | <u>55% of the 272 subjects followed up at 1 year met criteria for ICD-10 mental disorder</u> <u>women met criteria for significantly more diagnoses on average than men (1.9 vs. 0.9)</u> <u>lifetime prevalence of ICD-10 mental disorder was higher for females than males (65% vs. 51%)</u> <u>one month prevalence of ICD-10 mental disorder was higher for females than males (44% vs. 22%)</u> |
| | Psychiatric disorders (males) ICD-10 mental disorders Lifetime prevalence Schizophrenia 3% Schizo-affective 3% Bipolar affective disorder 2% Depressive episode 12% Recidivist depressive disorder 7% Continual affective disorder 11% Phobic disorder 26% Other anxiety disorder 10% Dissociative disorder 1% Somatoform disorder 8% Eating disorder 1% Any mental disorder Lifetime 51% 6-month 31% 1-month 22% | Psychiatric disorders (females) * $p < 0.05$ - 2% 2% 23%* 16%* 20%* 45%* 22%* 9%* 12% 10%* 65%* 46% 44% |

| Study | Measurement for psychiatric disorder | Psychiatric disorder |
|--|--|----------------------|
| US Brienza et al. (2000) Non-random sample – recruited by placing adverts in magazines, needle exchanges, methadone maintenance clinics and word of mouth 222 heroin injectors 51% receiving methadone maintenance. Median time in treatment 16 months (1-56 months) (41% female, n=91) Mean age 30 years (17-50) Methadone maintenance treatment programme (MMTP) Needle exchange programme (NEP) | Structured Clinical Interview for DSM-III-R < | |

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Part II

Country profiles

Chapter 7 The comorbidity situation in Bulgaria – epidemiological, clinical and therapeutic aspects

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Summary

We analyse the conception of comorbidity during the last twenty years in Bulgaria and the methodological and therapeutic approaches connected with it. Using a structured questionnaire we collected data for substance users who were treated in two psychiatric clinics in Sofia and Pleven during 2003. These initial data suggest that about 30% of the patients with substance addiction problems had another psychiatric problem too. In our chapter we interpret the time of onset of substance abuse behaviour in relation to the time of onset of other psychiatric symptoms. We also try to find out how the intake of alcohol and illegal substances modified the symptoms of another psychiatric disorder. We made an analysis of specifically cultural aspects on the course of the substance addiction and parallel psychiatric disorder.

Анализира се концепцията за коморбидност през последните 20 години у нас и свързаният с нея методичен и терапевтичен подход. Чрез използване на структуриран въпросник са събрани данни за пациенти, лекувани в 2 психиатрични клиники в София и Плевен, през 2003г. Първоначалните данни показват, че общо от всички пациенти, постъпили за лечение в психиатричните клиники, 30% са с коморбидност. Намерените данни се интерпретират по отношение възникването на алкохолна или друга зависимост спрямо другите психични заболявания. Също така се отчита как влияе приема на алкохол или психоактивните субстанции върху симптомите на другите психични заболявания. Анализират се специфични културални особености върху протичането на зависимостта и съпътстващите психични заболявания.

Introduction

The term 'comorbidity' was introduced into Bulgarian psychiatric practice after 1990, in parallel with the acceptance of the bio-psycho-social approach to the different forms of addictions. Up until that time the basic model for treatment of addictions had been the medical approach, which was accepted in each (inpatient and outpatient) psychiatric clinic in Bulgaria. The terminology which had been used was directed mainly toward alcohol dependence and parallel psychiatric diseases because until 1990 the use and misuse of other psychoactive substances had been very low.

Prior to 1990 the terms which were in common use in psychiatry connected with the parallel presence of substance abuse problems and psychiatric problems were 'secondary alcoholic abuse' and 'symptomatic alcohol abuse'.

These terms explained symptoms of alcohol misuse or dependence which appeared on the background of heterogeneous psychiatric disease (Morozov, 1983: 149-162; Yentine, 1990:269-88).

The authors connect the term 'secondary alcoholism' with the misuse of alcohol directly connected with some phase of a main psychiatric disorder. For example: drinking to relieve an anxious or depressive state. Excessive alcohol use is connected with exacerbation of main psychiatric diseases. In these cases alcohol use and misuse may hide the underlying psychiatric symptoms and they may not be recognised at all. Portnov and Petnitskaya (1971:258-69) pointed out that unmotivated alcohol misuse is a sign of an endogenous process. In these cases the patients very often try to normalise their state through the use of alcohol, in other words they take alcohol to 'self-medicate'.

An investigation among patients with Borderline Personality Disorder (BPD) showed that alcohol dependence is more common among women with this disorder (Onchev, 1994). Among them the feeling of guilt connected with the use of alcohol is found more often. There is a suggestion that people with BPD form alcohol dependence more rapidly and maintain their repertoire of drinking habits over a longer time in comparison to alcoholic patients without BPD. The syndrome of alcohol dependence among investigated patients is not homogenous. The signs of 'social harm' in connection with drinking are obtained from a different dimension to the clinical symptoms of dependency. Another investigation (Benatov, 1988) which included 143 patients with opioid kind of dependence, showed that after four years' observation 5.60% of them had polysubstance misuse and 1.39% had schizophrenia.

During recent years, medical practice in Bulgaria, especially psychiatric practice, has accepted the term 'comorbidity' with a meaning of the co-existence of two or more diseases (one of them being primary) which are interdependent (biologically and psychologically). This combination is some kind of 'defence mechanism' with which the patient looks for equilibrium and improved adaptation (Tzonev *et al.*, 2003).

Somatic diseases in alcoholic patients must not be described as comorbidity because they are conditions which are the result of consuming alcohol or other psychoactive substances. They might be describing associated illnesses rather than comorbidity.

A study on comorbidity in Bulgaria - aims and objectives

The aims of the study on comorbidity in Bulgaria were:

- To collect and analyse retrospectively data on the frequency of comorbidity disorders in two psychiatric clinics in Bulgaria (Sofia and Pleven) for a one-year period (2003).
- To highlight some cultural features connected with the development of dependency and co-existing psychiatric disorders.

The objectives of the study were:

- To understand the relationship between the time of onset of alcohol or another drug addiction to the onset of another psychiatric disorder.
- To find out how the intake of alcohol or other psychoactive substances impact the symptoms of co-existing psychiatric disorders.
- To analyse the collected data and draw conclusions about the effectiveness of existing therapeutic programmes in these clinics.

Background

The misuse of illicit psychoactive drugs in Bulgaria became a significant social and medical problem after 1990. During the last 5 years some epidemiological investigations among adolescents and especially in some middle schools in Sofia and in other parts of the country showed that one in four pupils smokes herbal cannabis (marijuana). Investigations also showed that 30,000 persons were heroin addicts. Some of them were admitted for residential or daily treatment in hospitals in Sofia (the capital of Bulgaria) and other large towns. During 2003 the psychiatric clinics in Sofia treated 1,600 drug addicts and 1,200 alcohol addicts.

The Third Psychiatric Clinic for Borderline Disorders and Addictions in Sofia is a centre for the implementation of new therapeutic methods and clinical research, as well as being a centre for educating specialists in addiction medicine. It is part of the University Hospital of Neurology and Psychiatry in Sofia. The clinic is for patients with different forms of addiction, borderline disorders, and patients with somatic and neurological problems which are consequent to drug and alcohol abuse. The patients who are admitted to this clinic are from all regions in Bulgaria. Treatment is free of charge for patients who are referred with appropriate health insurance documentation.

The clinic has a multidisciplinary approach to its work, offering the following programmes:

- Detoxification - up to 10 days.
- Pharmacotherapy - the following medications are used:
 - Antidepressants: Coaxil (tianeptin) up to 37.5mg per day; Seroxat (paroxetine) up to 40mg per day; Biflox (fluoxetine) 20mg per day; Tritico (trazodone) up to 250 mg per day;
 - Neuroleptics: levomepromazine up to 75mg per day; Seroquel (quetiapine) up to 600 mg per day; Fluanxol (flupentixol) up to 2 mg per day;
 - Nootropil (piracetam) up to 4 g per day.
 - Anxiolytics: diazepam up to 40 mg per day; clonazepam up to 4 mg per day; alprazolam up to 2 mg per day
- Acupuncture - this method is appropriate for patients with alcohol dependency, those who misuse cannabis (marijuana) and heroin who have inversion of sleep phases, and for patients with affective and anxiety disorders.

- Psychotherapy - Cognitive Behaviour Therapy (CBT) and psychological support of the patient and his/her family.

The therapeutic programmes in the Clinic of Alcohol and Drug Abuse in Pleven are the same with the exception of acupuncture. The annual number of patients who are treated in this clinic is 400-450. Of these, approximately 60 to 70% are drug and alcohol addicted patients. We examined the files of 305 patients who entered the Clinic in Sofia during 2003. We also examined the medical files of 416 patients who were treated during 2003 in the Clinic in Pleven, which is part of University Hospital in Pleven (the fifth largest town in Bulgaria in terms of population). The data collected in the Sofia clinic shows that out of 305 admitted to the clinic 188 (61.63%) had various forms of addiction. The data collected from the clinic in Pleven show that 262 of the 416 patients (62.98%) admitted had different forms of addiction. Comorbidity was diagnosed in 56 (29.78%) cases in Sofia and in 47 cases (17.93%) in Pleven.

Cases diagnosed as comorbidity were then subjected to the following procedures:

- Structured diagnostic interviews.
- Psychiatric and Neurological observations.
- Administration of the Multi-city Questionnaire.

The data for this investigation were taken from medical records using a semi-structured questionnaire which asked for information on gender; age; period of treatment; number of previous hospitalizations; marital and employment status; education; problems with alcohol and drugs; period of addiction; symptoms of addiction; problems with psychoactive substances; kind of substance or substances used; manner of use; frequency of use; tests for HIV, hepatitis B, and hepatitis C. In the questionnaire there is a special part for estimation of other psychiatric diagnoses according to ICD-10 criteria.

Data interpretation and discussion

Out of all the patients (305) who were admitted to the Sofia clinic 131(42.95%) were males and 174 (57.05%) were females (see Table 7.1). Place of residence was given as 265 (86.88%) living in towns and 40 (13.12%) living in villages. Out of the total (416) patients admitted to the Pleven clinic, 401 (96.39%) were males and only 15 (3.61%) were females. Of these, 123 (29.57%) lived in towns and 293 (70.43%) in villages.

Table 7.1: Demographic data for patients with comorbidity, Sofia and Pleven, 2003

| Demographic data | | Sofia (n = 56) | Pleven (n = 47) |
|-------------------|-----------------------|----------------|-----------------|
| Gender | Male | 38 (67.86%) | 46 (97.87%) |
| | Female | 18 (32.14%) | 1 (2.13%) |
| Age (years) | 15-30 | 22 (39.28%) | 14 (29.78%) |
| | 31-45 | 20 (35.71%) | 14 (29.78%) |
| | 46-60 | 7 (12.50%) | 16 (34.04%) |
| | Over 60 | 7 (12.5%) | 3 (6.38%) |
| Marital status | Single | 23 (41.07%) | 20 (42.55%) |
| | Married | 23 (41.07%) | 17 (36.17%) |
| | Widow/widower | 1 (1.79%) | 2 (4.50%) |
| | Divorced | 9 (16.07%) | 8 (17.02%) |
| Employment status | School pupil/ student | 0 (0.00) | 2 (4.25%) |
| | Employed | 19 (33.93%) | 7 (14.89%) |
| | unemployed | 33 (58.93%) | 24 (51.06%) |
| | Retired | 4 (7.14%) | 14 (29.79%) |
| Education | No formal education | 5 (8.93%) | 1 (2.13%) |
| | Primary school | 3 (5.36%) | 15 (31.91%) |
| | Secondary school | 35 (62.50%) | 24 (51.06%) |
| | College/university | 13 (23.21%) | 7 (14.89%) |

The numbers treated for comorbidity in Sofia were 38 males and 18 females; in Pleven it was males (46 out of 47) who were treated predominantly. There are more young patients in Sofia and more elderly in Pleven. On average, more patients were employed (34%) in Sofia than in Pleven. The same is true for those patients who completed either secondary or university level education.

Table 7.2: Length of alcohol use in patients with alcohol dependence treated in Sofia and Pleven, 2003

| Length of alcohol abuse | Sofia (n = 40) | Pleven (n = 38) |
|-------------------------|----------------|-----------------|
| Up to 5 years | 10 (25.00%) | 12 (31.57%) |
| From 5 to 10 years | 9 (22.50%) | 13 (34.21%) |
| From 11 to 19 years | 11(27.50%) | 8 (21.05%) |
| 20 years and over | 10 (25.00%) | 5 (13.17%) |

The data from Table 7.2 show that among the patients treated in Sofia there was a higher percentage of long-term users (25%) compared with those treated in Pleven (13.17%). The data show also that the number of patients considered to have somatic problems, in Sofia was 23 (57.5%), while the number of patients for Pleven was 15 (39.47%). One of the reasons for such differences is that the admission of patients to the Sofia clinic is from all parts of Bulgaria. These patients very often have somatic or neurological complications and that is the main reason why local medical services send them to the University Hospital of Neurology and Psychiatry in Sofia. We did not find any correlation between marital status, employment status, educational level and length of alcohol use.

Table 7.3: Additional psychiatric diagnosis in patients with alcohol dependence in, Sofia and Pleven, 2003, according to ICD-10 criteria

| Additional psychiatric diagnosis | Sofia (n = 40) | Pleven (n = 38) |
|--|----------------|-----------------|
| Psycho-organic syndrome(F06) | 2 (5.0%) | 1 (2.63%) |
| Bipolar Affective Disorder (F31) | 5 (12.5%) | 9 (23.68%) |
| Depression (F32) | 15 (37.5%) | 4 (10.52%) |
| Phobias (F40) | 0 (0.0%) | 1 (2.63%) |
| Generalized Anxiety Disorder (F41) | 4 (10.0%) | 2 (5.26%) |
| Mixed Anxiety and Depression (F43.2) | 6 (15.0%) | 9 (23.68%) |
| Adjustment disorders (F43) | 3 (7.5%) | 0 (0.0%) |
| Dissociative disorders (F44) | 1 (2.5%) | 0 (0.0%) |
| Neurasthenia (F48.0) | 0 (0.0%) | 1 (2.63%) |
| Sleep disorders (F51) | 1 (2.5%) | 0 (0.0%) |
| Disorders of adult personality and behaviour (F60) | 1 (2.5%) | 4(10.5%) |
| Acute and chronic psychoses (F20, F23) | 2 (5.0%) | 7(18.45%) |

An additional or secondary psychiatric diagnosis applying to both groups were established using the diagnostic criteria of ICD-10. For example, a diagnosis of depression (F 32) for 15 patients (37.5%) from the first group (Sofia) and 4 (10.52%) of patients from the second group (Pleven), was established with the following criteria having been met: subdued and depressed mood; loss of interest or pleasurable experiences; sleep disturbances; guilt or loss of self-confidence; diminished libido; suicidal ideation; or disturbed appetite.

It can be seen from Table 7.3 that substantial differences exist between the two groups in terms of the incidence of bipolar disorder (12.5 % against 23.68%), depressive disorder (37.5% against 10.52 %), generalized anxiety (10% against 5.26%), mixed anxiety and depression states (15% against 23.68%), disorders of adult personality and behavior (2.5% against 10.52%) and particularly for acute and chronic psychoses (5% against 18.45%). At this stage we can not provide a satisfactory explanation for the differences noted above. Perhaps difficulties in the establishment of diagnosis of an additional psychiatric disorder should be noted as well as the lack of standardised instrumentation.

Figure 7.1: Occurrence of an additional psychiatric disorder with alcohol dependence, Sofia and Pleven, 2003

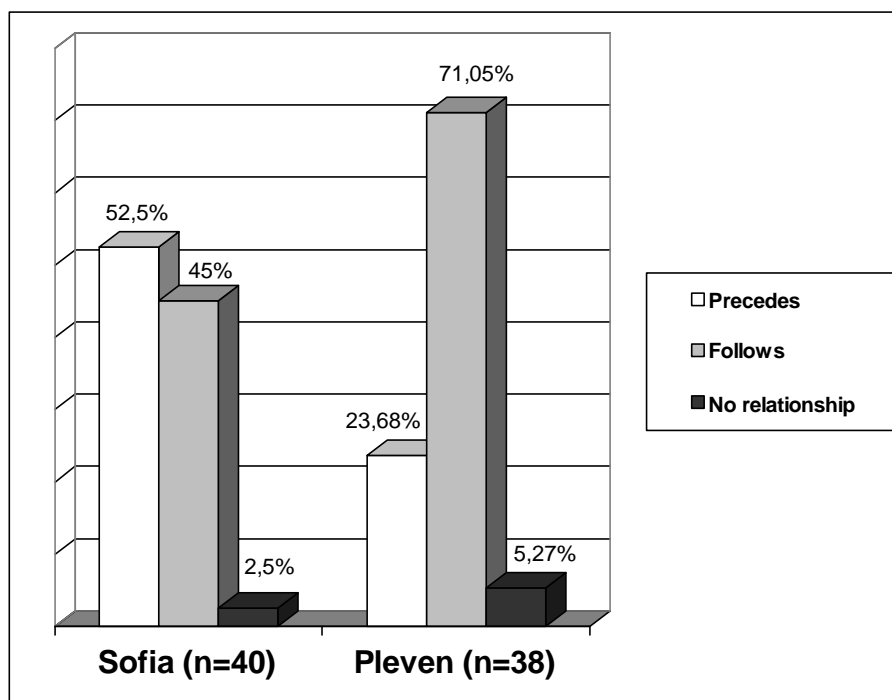


Figure 7.1 shows significant differences between the two study groups in terms of the occurrence of an additional psychiatric illness with alcohol dependence. Dependence preceded another psychiatric disorder in 21 (52.5%) of cases in Sofia but only in 9 cases (23.68%) in Pleven. For 18 patients (45%) in Sofia dependence occurred after another psychiatric illness, but in Pleven it was true for 27 patients (71.05%). This result supports to some extent our initial hypothesis that comorbidity is a sort of 'defence' by which the organism seeks balance of its condition and improvement in adaptation. For one patient (2.5%) in Sofia and two patients (5.27%) in Pleven there is no relationship between two disorders.

Figure 7.2: Impact of alcohol dependence on the symptoms of another psychiatric disorder, Sofia and Pleven, 2003

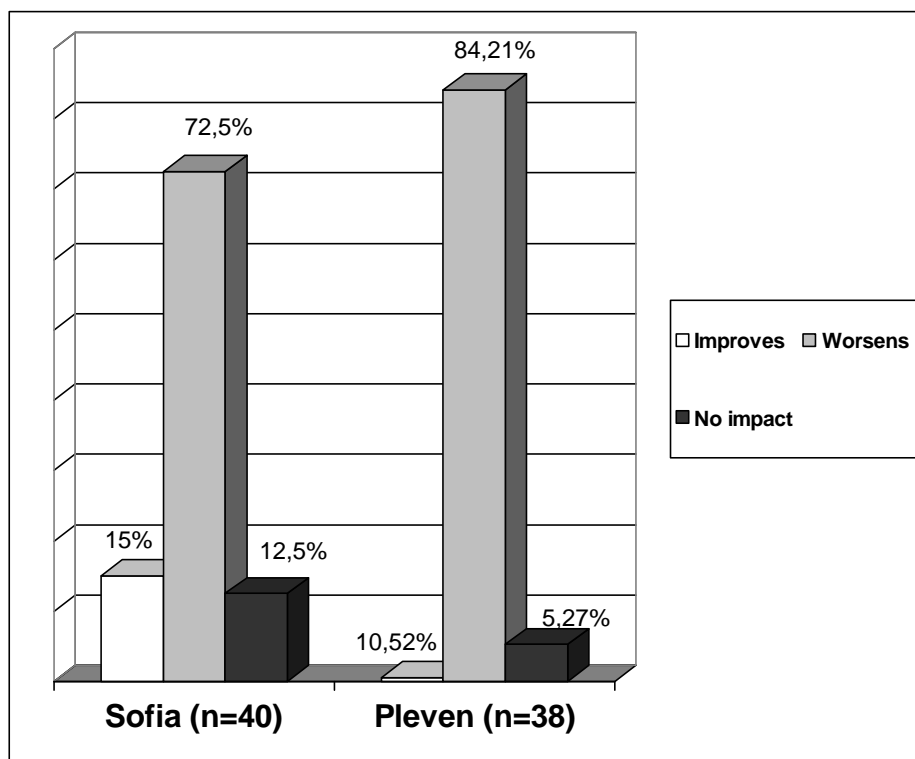


Figure 7.2 shows that the occurrence of alcohol dependence worsens another psychiatric disorder in 29 patients (72.5%) in Sofia and in 32 patients (84.21%) in Pleven. This result is in line with other scientific studies carried out in Bulgaria and other countries (Portnov and Pyatnitckaya, 1971). Very often excess alcohol correlates with worsening of the symptoms of another psychiatric disorder.

Table 7.4: Demographic data for patients with drug dependence and comorbidity, Sofia and Pleven, 2003

| Demographic data | | Sofia (n = 16) | Pleven (n = 9) |
|-------------------|------------|----------------|----------------|
| Gender | Male | 10 (62.50%) | 9 (100.00%) |
| | Female | 6 (37.5%) | 0 (0.00%) |
| Age (years) | 15-30 | 15 (93.75%) | 8 (88.89%) |
| | 31-45 | 1 (6.25%) | 1 (11.11%) |
| Marital status | Single | 14 (87.50%) | 9 (100.0%) |
| | Married | 1 (6.25%) | 0 (0.00%) |
| | Divorced | 1 (6.25%) | 0 (0.00)% |
| Employment status | Student | 0 (0.00%) | 2 (22.22%) |
| | Employed | 2 (12.50%) | 1 (11.11%) |
| | Unemployed | 14 (87.50%) | 6 (66.67%) |
| Education | Primary | 3 (18.75%) | 6 (66.67%) |
| | Secondary | 12 (75.00%) | 3 (33.33%) |
| | Higher | 1 (6.25%) | 0 (0.00%) |

From Table 7.4 it can be seen that in the Sofia group of treated patients 10 were male and 6 were female, whilst in Pleven all 9 were male. The proportions of unemployed and those with a secondary or tertiary level of education were larger in Sofia. The number of drug addicted patients with a history of drug abuse of less than 5 years is dominant in the Sofia group - 12 (75%) ; but in Pleven those with a drug abuse history of between 5 and 10 years dominate - (66.67%). Twelve (75%) of the drug-addicted patients in Sofia but only 3 (33.33%) in Pleven had not been treated in another psychiatric clinic.

In Sofia 5 males have an additional (second) substance abuse problem; alcohol (1); cannabis (marijuana) (1); amphetamines and barbiturates (3). In Pleven 5 males are cannabis (marijuana) abusers; 2 use amphetamines and cocaine, and 2 barbiturates and benzodiazepines. Most subjects in both towns are daily substance abusers - 7 (43.75%) in Sofia and 5 (55.55%) in Pleven.

The main psychoactive substance being abused in both study groups is heroin. Such use has been growing trend in Bulgaria for the last 10 years. Amphetamine and cannabis use have been gradually increasing too, but it is the use and abuse of heroin that is of primary significance. The mode of administration for heroin is mostly intravenous - 7 (43.75%) in the Sofia group and 6 (66.67%) for the Pleven group.

Five males in the Sofia group have been tested for HIV, hepatitis B and hepatitis C, and 7 from the Pleven group. Four subjects in the two groups combined have positive results for hepatitis C. In the last three years over 70% of the heroin-addicted patients in Bulgaria have tested positive for hepatitis C which, with good reason, is causing alarm among medical circles in Bulgaria.

Table 7.5: Presence of another psychiatric diagnosis among substance-dependent patients, Sofia and Pleven, 2003

| Other psychiatric diagnosis | Sofia (n = 16) | Pleven (n = 9) |
|--|----------------|----------------|
| Bipolar disorder | 1 (6.25%) | 0 (0.00%) |
| Depression | 3 (18.75%) | 1 (11.11%) |
| Generalized anxiety | 2 (12.50%) | 0 (0.00%) |
| Mixed anxiety and depressive states | 2 (12.50%) | 1 (11.11%) |
| Adjustment disorders | 5 (31.25%) | 1 (11.11%) |
| Neurasthenia | 0 (0.00%) | 1 (11.11%) |
| Disorders of adult personality and behaviour | 3 (18.75%) | 3 (33.33%) |
| Acute and chronic psychoses | 0 (0.00) | 2 (22.23%) |

Table 7.5 demonstrates that differences exist in both groups in regard to the prevalence of: (a) depression (18.75% in the first group compared with 11.11% in the second one); (b) generalised anxiety occurred in two patients in the first group (12.5%) but none in the second group. The most significant differences are found for adjustment disorders - five (31.25%) in Sofia compared to one (11.11%) in Pleven. Two (22.23%) of the Pleven patients have acute and chronic psychoses. However, statistically valid correlations cannot be calculated because of the small number of patients in these sub-samples with comorbidity and dependence to psychoactive substances.

Table 7.6 gives information on the evolution of dependence in relation to other psychiatric disorders. There is a slight tendency for dependence to occur after another psychiatric illness in the Pleven group (55.56%), whereas in Sofia the reverse is true (only 31.25%). The occurrence of dependence tends to worsen the impact of other psychiatric disorders in both groups: Sofia (68.75%) and Pleven (100%).

Table 7.6: Evolution of substance dependence in relation to other psychiatric disorders, Sofia and Pleven, 2003

| Dependence occurrence | Sofia (n = 16) | Pleven (n = 9) |
|-----------------------|----------------|----------------|
| Precedes | 9 (56.25%) | 4 (44.44%) |
| Follows | 5 (31.25%) | 5 (55.56%) |
| No relationship | 2 (12.50%) | 0 (0.00%) |

Conclusions

The prevalence of comorbidity disorders is comparatively low in Bulgaria. According to the results of this investigation it is 29.78% for Sofia and 17.93% for Pleven. This frequency is lower than some results of other international investigations. One of the important reasons for this is that there is no implementation of standardised diagnostic instruments for verification of diagnoses of comorbidity.

Use of the term 'comorbidity' is more accurate than the term 'dual diagnosis' because one and the same patient might have more than one psychiatric disorder and might use more than one psychoactive substance. Somatic and neurological complications are not defined in the same way as comorbidity disorders.

Depressive disorders were more common in the Sofia group, a sample which is mixed (males and females) and is a predominantly urban population, and more patients had completed secondary or tertiary education. Acute and chronic psychoses were more prevalent often in the group from Pleven.

For a higher proportion of patients (45% for Sofia and 71% for Pleven) abuse problems began after the onset of another psychiatric disorder. To some extent this result shows that comorbidity is some kind of 'defence' with which an individual looks for equilibrium in his mental condition and wants to improve his adaptation.

The data presented here show that patients with heroin abuse most often have maladaptive symptoms and behavioural problems. Because of the comparatively small number of patients with heroin abuse in these samples we can not draw clear conclusions about comorbidity among them.

The results show there are many gaps in the field of diagnostic and treatment of patients with comorbidity. It will be necessary for the Bulgarian health system to make some policy changes in the organisation of estimation and in the treatment services for such kinds of psychiatric and abuse disorders.

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Chapter 8 Mental and abuse disorders (comorbidity) in Denmark

P Vendsborg

Summary

Comorbidity/dual diagnosis is in Denmark often used for people with psychosis and abuse. Sometimes the meaning is psychosis and (injecting) opiate use and sometimes abuse and any mental disorder. The corresponding greatly varying order of numbers of people is seen in Table 8.1 and some investigations of prevalence given. A presentation of the treatment system is given and seen in Table 8.2. The possibilities for help for people with comorbidity are described and the problems for those with psychosis and opiate use are emphasized. The ongoing restructuring of the municipal public organization and its possible influence on the treatment system is mentioned.

"Dobbeltdiagnose" anvendes oftest som betegnelse for mennesker, som lider af en sindssygdom (psykose) og har et misbrug. Begrebet opfattes sommetider smallere (psykose og morfikamisbrug) eller bredere (sindslidelse generelt og misbrug). Størrelsesordenen af de tilsvarende vidt forskellige antal mennesker, som er omfattede, ses i Tabel 8.1 og nogle undersøgelser af hyppighed refereres. Der gives en kort gennemgang af behandlingssystemerne for sindslidende og mennesker med henholdsvis alkohol- og stofmisbrug. En oversigt over systemerne ses i Tabel 8.2. Hvor, mennesker med psykisk lidelse og misbrugsproblemer kan få hjælp, beskrives, og vanskelighederne for de med psykose og morfikamisbrug fremhæves. Den kommende omstrukturering af behandlingssystemerne som følge af strukturreformen nævnes.

Introduction

Comorbidity is an unspecific term used to describe people who have both mental and substance abuse problems. In the context of Danish psychiatry, people with a 'dual diagnosis' mainly means people who have a serious psychiatric illness (psychosis) and substance abuse problems. As from one-third of one-half of people with psychosis have a substance abuse problem, the problem concerns 10,000 to 15,000 individuals in Denmark. In some instances, dual diagnosis is used more narrowly to define people with psychosis and injecting drug problems; about 1,000 individuals. Comorbidity can also be used for people with substance abuse problems and any psychological /psychiatric disorder. Used in this context, the term therefore includes the greater proportion of people with substance abuse problems, i.e. some hundreds of thousands in the Danish population of about 5.5 millions. Table 8.1 gives the number of people with mental disorders, substance abuse problems and comorbidity in Denmark.

Table 8.1: Number of people with mental and/or substance abuse disorders in Denmark

| Mental disorder | Mental and substance abuse disorders | Substance abuse disorder |
|-------------------------------|---|---------------------------------|
| Psychosis 20,000 - 40,000 | Psychosis & injecting opiate use 1,000 Psychosis & substance abuse 10,000 – 15,000 | Drug abuse 20,000 – 30,000 |
| Non-psychosis 400,000-800,000 | Non-psychosis and abuse 100,000 – 200,000 | Alcohol abuse 200,000 – 400,000 |
| Total population = 5,500,000 | | |

Approximately 1,600 of the admissions to psychiatric wards in Denmark during 1994 were related to the use of drugs. About a half of patients with a long-term association with the psychiatric services were dually diagnosed (Mehlbye, 1997). A modest survey in 1996 of persistent somatisers in a psychiatric hospital in Aarhus found that 48% were dependent on alcohol or drugs, 48% had DSM-III-R personality disorder and 16% were mentally retarded (Fink, 1995). A larger scale study of case records and PSE interviews with in-patients admitted to 12 psychiatric departments across Denmark during October 1996 found that the co-occurrence of substance use disorders and mental disorders was 37.3% (Hansen *et al.*, 2000). In the majority of cases information on substance use disorders was present in the case records, although they had not resulted in a diagnosis. Thus there is an under-diagnosis in Denmark of substance use amongst psychiatric in-patients. This is not only due to the relevant information not being acted upon by psychiatrists but also because of concealed diagnostic signs and symptoms. It is also suggested that under-diagnosis of substance abuse disorders may also occur in the somatic hospital setting (Hansen, 1999).

A survey of patients conducted in 1994 in a general (somatic) hospital in Copenhagen found that 28.6% (125/437 patients) fulfilled one or more diagnostic criteria for an alcohol problem (Nielsen *et al.*, 1994). The problem was significantly higher amongst male patients (48.0%) than among female patients (16.2%). The highest prevalence rates of patients with such a diagnosis were in internal medicine departments (32.4%) and surgical departments (28.5%) and lowest in females in gynaecology and obstetrics (22.2%).

A study that compared heavy cannabis users with abusers of other substances who were seeking treatment for their abuse problems found that although cannabis users were generally young, 27.5% had been inpatients at psychiatric hospitals at some point in their lives with disorders unrelated to psychoactive substance abuse (Arendt and Munk-Jorgensen, 2004). Cannabis users had significantly raised levels of depression and personality disorders compared with users of other drugs, whilst the prevalence of schizophrenia was marginally raised.

Treatment system for abuse problems

In Denmark, treatment provision for people with problems of drug and alcohol abuse is mainly the responsibility of the social sector in the counties. The system is run by social workers with some psychologists and nurses. Doctors are mainly advisors working part-time and are often not psychiatrists. The system is divided in two separate subsystems – one for people with alcohol problems and one for those with drug problems.

Alcohol abuse treatment

The alcohol treatment system was built up in the late 1950s under the health legislation. It still has its roots here although it has now transferred to the social sector. Service provision consists of out-patient clinics and a few residential treatment centres. In smaller towns the clinics are open for a few hours two or three days/evenings each week. In the larger towns clinics are open daily and some evenings. The system is managed by social service departments in the counties. In Copenhagen service provision remains in the health sector.

There is private sector involvement in the treatment of alcohol abuse. It mainly consists of institutions offering treatment programmes lasting 4 to 8 weeks based on the Minnesota Model. In addition, there are residential clinics offering stabilisation and rehabilitation.

Drug abuse treatment

The drug abuse treatment system was started in the 1970s when drugs started to be misused in Denmark. It consists of out-patient clinics and some residential treatment establishments. In the beginning this system was strictly drug-free (i.e. used no drug substitution treatment) and was without the involvement of any doctors. Later it became more oriented towards harm reduction and today methadone maintenance is a dominating feature. Older clients with heroin addiction are still a major part of the treatment population but younger clients abusing of cannabis (hashish) and stimulants are becoming more frequent. In the drug abuse arena too, there are private institutions offering treatment and stabilisation based on the Minnesota Model.

The psychiatric treatment system

The psychiatric treatment system in Denmark is a part of the health care system and headed by psychiatrists. It consists of more than a hundred community mental health centres with between one and three psychiatric departments in each county. The main focus has for many years been long-term seriously ill people with psychosis. It is supplemented by a specialised social support system called 'social psychiatry'.

The psychiatric medically-oriented treatment system has, in most counties, transferred to the socio-political and administrative sectors. The psychosocial support system is found in both the county and the municipal social sectors.

General practitioners treat most people with non-psychotic mental disorders. In some cases they refer such patients to practising psychiatrists. The latter seldom treat people with concomitant substance abuse problems. There is no private sector effort in psychiatry except small residential centres offering stabilisation and rehabilitation lasting from months to years and long-term supported-living places. Table 8.2 outlines the systems for helping people with mental disorders and substance abuse problems in Denmark.

Table 8.2: Treatment and support systems for people with mental and/or substance abuse disorders in Denmark

| Sector | County health | County social | Municipal social | Private |
|-----------------------|---|---|--|---|
| Substance abuse | Alcohol: out-patient and institutional ⁽¹⁾ | Alcohol: out-patient and institutional ⁽¹⁾ | Social worker (general) | Alcohol: out-patient and institutional |
| | | Alcohol: out-patient and institutional ⁽²⁾ | | Alcohol: out-patient and institutional |
| Psychiatric disorders | Treating psychiatry: community and hospital wards | Social psychiatry: housing, activity and employment | Social psychiatry: social worker; personal support; outreach workers; housing, activity and employment; nursing and practical help | Social psychiatry: housing, activity and employment |
| | Practice: general practitioners and psychiatrists | | | |
| | Somatic hospitals | | | |

(1) Legislation in health laws. Administration usually in the social sector, rarely in the health sector (e.g. Copenhagen).

(2) Legislation both in health and social laws. Administration in the social sector.

Treatment of people with comorbidity

As can be seen from the description above, people with comorbidity have to be treated either in the psychiatric system or in the substance abuse treatment system. The target groups for the help offered from the different systems depends principally on tradition and only in recent years for a small part on political decisions.

People with psychotic illness with or without substance abuse problems are treated in community mental health centres and their psychiatric departments. Alcohol is the dominant problem, together with cannabis for a great many of clients. Individuals rarely present with problems caused by other substances.

Table 8.3 presents the distribution of substance abuse problems in a community mental health centre in a relatively socially-deprived area of Copenhagen.

Table 8.3: Substance abuse among patients with schizophrenia treated in a community mental health centre in Copenhagen

| Substance used | Number of patients (n = 277) | Percent |
|--|------------------------------|---------|
| All substances | 139 | 50 |
| Alcohol + any other | 107 | 39 |
| Alcohol | 51 | 18 |
| Cannabis + any other | 58 | 21 |
| Alcohol and cannabis | 30 | 11 |
| Tranquillisers + any other | 23 | 8 |
| Amphetamines, ecstasy, any other | 5 | 2 |
| Cocaine + any other | 4 | 1 |
| LSD, magic mushrooms + any second drug | 3 | 1 |
| Chaotic (including opiates) | 10 | 4 |
| Tobacco | 151 | 55 |

Source: personal communication, Ole Garsdal.

The social psychiatric services have made available, to a small extent, supported-living places for people with psychosis and substance abuse problems. For most supported-living places it is a problem if their residents have an abuse problem.

People with alcohol and eventually smaller problems with, for example, cannabis with or without non-psychotic psychiatric illness are treated within the alcohol treatment system. Non-psychotic disorders such as anxiety and depression are treated also or in collaboration with the patient's own general practitioner. (Every citizen in Denmark is registered with a general practitioner.)

People with drug abuse with or without a non-psychotic psychiatric disorder are treated within the drug abuse system. In some instances, treatment is provided in collaboration/parallel with the patient's own general practitioner.

It has been difficult to get either the psychiatric or the drug abuse treatment system to take the lead responsibility for the care of injecting drug users in methadone maintenance treatment who have been diagnosed with a psychotic disorder. In Copenhagen a small psychiatric out-patient service and some hospital beds have been established for this group. Treatment and supported-living facilities are insufficient both in Copenhagen (where the problems are most concentrated) and in the rest of the country.

The problems for this group of people have been discussed in health circles for several years, as well as in the press. Parliament has made clear (although not in legislation) that psychiatry has the main responsibility for people with mental (psychotic) disorders and any kind of abuse problems. This policy has not yet been implemented in practice.

Future developments

The structure of local and regional government in Denmark is due to be changed in the coming years. The 14 counties (and Copenhagen) are being reduced to 5 regions each covering 600,000 to 1,600, 000 inhabitants. The 275 municipalities are to be reduced to about 100 with from 20,000 to 30,000 up to 500,000 inhabitants (mostly 30,000 to 50,000). Health (hospitals and general/specialist practice) will be the chief responsibility for the new regions. The responsibility for social services will be transferred to the municipalities.

There has been much discussion about the psychiatric services and those of the substance abuse service in the context of these changes to the administrative structure. The reforms seem to threaten the little progress that there has been over last 10 to 15 years in the counties to the unification of these services.

There is a strong need to combine the services offered by the health and social sectors. It seems now that the psychiatric (medical) services will become a sector in the regions, which will have to collaborate with the social services (social psychiatry) in the municipalities. In some cases, the regions could be responsible for both the psychiatric and substance abuse services, and both the health and social elements as entrepreneurs in the municipalities (if they wish to).

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Chapter 9 Comorbidity in Finland - substance abuse and mental health services in the Tampere area

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Summary

Alcohol misuse is a serious health problem in Finland: about 90 % of the adult population use alcohol. At the same time, there was a steady increase in the use of drugs during the 1990s. In general, experimenting with drugs, drug abuse and drug-related problems increased throughout the country during the 1990s. The prevalence of mental health disorders is stable. Finnish municipalities are responsible both for organising and implementing substance abuse and mental health services. This chapter describes the service delivery in the Tampere area. More emphasis could be put on developing primary care and on the education of staff about comorbidity. There is little national research data on dual diagnosis; this needs extra attention in the future.

Alkoholin väärinkäyttö on vakava terveyden ongelma Suomessa: noin 90 % aikuisväestöstä käyttää alkoholia. Samalla huumausaineiden kokeilu, käyttö ja huumeisiin liittyvät päihdehaitat lisääntyivät 1990 –luvulla. Mielenterveyshäiriöiden esiintyvyys on vakiintunut. Suomessa kunnat ovat vastuussa mielenterveys- ja päihdepalveluiden suunnittelusta ja toteutuksesta. Artikkelissa kuvataan palveluiden järjestämistä Tampereen alueella. Tulevaisuudessa perusterveydenhuoltoa tulisi kehittää ja henkilöstö hyötynee komorbiditeettiin liittyvästä koulutuksesta. Tällä hetkellä kaksoisdiagnoosista on saatavilla vasta vähän kotimaista tutkimustietoa; lisätutkimusta tarvitaan.

Introduction

In Finland, there was a steady increase in the use of drugs during the 1990s. The variety of substance abuse services followed this trend. There are governmental good practice guidelines for the development of both the substance abuse and mental health services in Finland (Ministry of Social Affairs and Health, 2001, 2002). Special attention should be given to the development of care for substance abusers with severe mental illness (Ministry of Social Affairs and Health, 2002). The mental health services and substance abuse services are currently in a process of change; the former has gone through the deinstitutionalisation of psychiatric services since the 1980s and the latter a growth of Non-Governmental Organisations (NGOs) working within substance abuse services (Kaukonen, 2003). The aim of this chapter is to describe briefly the Finnish trends on comorbidity and in one Finnish area, Tampere, and the substance abuse and mental health services in that specific context.

Alcohol misuse in Finland

About 90% of the adult Finnish population use alcohol. The estimated number of alcohol misusers is 250,000 to 500,000, i.e. about 6% to 12% of the population older than 18 years of age (STAKES, 2003a). The ESPAD study indicates that age of first use of alcohol is between 13 and 15 years (STAKES, 2003a). Alcohol dependence is at least twice as common among men as women. The estimates vary from 4% to 8% of the population at any point in time and 8% to 15% for lifetime use (Pirkola and Sohlman, 2005). The proportions with alcohol dependence are: males 6.5%, and females 1.4% (Pirkola *et al.*, 2005).

Drug users in Finland

Experimenting with drugs, drug abuse and drug-related problems increased throughout the country during the 1990s. Since the early 1990s, the prevalence of drug use in Finland has been measured by seven population surveys, the most recent of which was conducted in 2002. In this survey, 12% of the 15-69 year age-group which responded reported having tried or used cannabis during their lifetime. Cannabis use during the last year was reported by 3%, while 2% had used amphetamine during their lifetime and 1% opioids (STAKES, 2003b).

In Finland, the population was 5,197,000 inhabitants at the end of 2002. Based on the 2002 results, there were an estimated 450,000 persons in Finland who had used drugs during their lifetime, about 100,000 had used drugs during the last year, and some 40,000 had done so during the last month. National hospital statistics on drug-related illness report 1,121 episodes due to narcotics and 767 episodes due to drug psychosis as the primary illness in 2002 (STAKES, 2003b).

The official estimated number of injecting drug users is 11,000 to 14,000 persons in the country, but there are some estimates with even higher numbers. The estimated number of both male and female drug users varies depending on the type of drug. The proportion of amphetamine and opiate users in Finland are 1.1% to 1.5% for males and 0.1% to 0.2% females (STAKES, 2002). According to a survey conducted in 2002, the percentage of 15-16 year olds having tried illegal drugs at least once in their lifetime was 10.9%. Compared to the results in 2000, this proportion declined by 0.3 percentage points (Luopa *et al.*, 2003).

In 2002, a total of 131 new HIV notifications were made in Finland, and in 20% of the cases intravenous drug use was the source of infection. The total number of HIV cases related to IV-drugs was 288 cases by the end of 2003 (HivNet Nordic 2003). According to surveys conducted at health counselling centres in 2002, 38% to 60% of injecting drug users had contracted hepatitis C, with the highest percentages to be found at centres in Greater Helsinki and the lowest at centres elsewhere. According to a drug treatment demand study, 11% of clients entering drug treatment were hepatitis B positive in 2002 (STAKES, 2003b).

Estimated prevalence of dual diagnosis in the population

About one quarter of Finns suffer from psychological symptoms with adverse effects at some point of their lives. An estimated 15% to 20% suffered from a diagnosable mental disorder over the past year (Pirkola *et al.*, 2002). The most common mood disorder is depression, with 4% to 9% of the population experiencing it over the past year and 10% to 20% at some point of their life. The prevalence of bipolar mood disorders is about 1% to 2% of the population. Between 5% and 15% of the population is estimated to suffer from some type of personality disorder. Increased substance use increases the risk of psychotic symptoms. The most common psychotic disorders include many short-term mental disturbances. The estimate for schizophrenia is 0.5% to 1.5% of the population (Pirkola and Sohlman, 2005). The number of mental disorders has not increased over past decades (Pirkola *et al.*, 2005).

Since the 1990s, observations made by professionals working with psychiatric patients in Finland indicate that patients' use of illicit drugs has increased, especially as regards patients who have the severest psychiatric symptoms and are in need of hospitalisation.

According to hospital statistics, co-occurring drug-related and other psychiatric diagnoses increased about five-fold (from 441 treatment episodes to 2,130 episodes) during the period 1987-2002. The treatment episodes due to diagnoses of illicit opiate use and other psychiatric disorder(s) have tripled since 1996. According to Pirkola and Wahlbeck (2004) hospitalisations for dual diagnosis increased between 1987-2002 within every diagnostic combination from three- to ten-fold. The most significant increases were the observed frequencies of diagnosed psychotic and affective diagnosis combined with substance use diagnosis, whereas the yearly number of clients with comorbid substance use discharged increased from 441 to 2,242 during the period of study.

Alcohol misusers in treatment

There was a total of 33,211 clients treated in hospital with diagnoses related to alcohol in 2002, and 80% of these patients were men. A further 11,210 clients received treatment in substance abuse services, and 4,784 clients within alcohol services provided by the A-clinic Foundation. Nationally, 5,107 clients used the housing facilities provided by substance abuse services (STAKES, 2003a). A total of 24,872 intoxicant-related illnesses necessitating hospital care episodes in 2002 had a primary diagnosis of alcohol. Alcohol-related illnesses resulting in hospital care episodes in 2002 with alcoholism as the primary illness totalled 6,735. During 2002 a total of 11,210 clients received institutional care in institutions for substance abusers (STAKES, 2003a).

Drug users in treatment

The primary diagnosis was drugs in a total of 1,786 intoxicant-related illnesses resulting in hospital care episodes in 2002 (STAKES, 2003a). Cannabis has been significant as the primary drug leading to substance abuse treatment (18%), despite the fact that drug treatment data indicate the most common primary drugs to be stimulants (27%) and opiates (28%) for those entering treatment in 2000-2002 (STAKES, 2002). The percentage of those entering treatment due to cannabis was the highest at youth centres offering treatment for under 25-year-olds, with 26% entering treatment primarily for this reason. Cannabis predominated as the main drug in 30% of those entering treatment for the first time ever in the substance abuse services in 2002. The prevalence of cannabis use is also reflected in polydrug use among the drug clients in services for substance abusers, where it was mentioned among the first three substances by 60% of clients. The next drugs mentioned most commonly were stimulants (58%), alcohol and narcotics (42%), opiates (39%) and sedatives (32%). Women accounted for one-fifth of those entering treatment (Stakes 2003b).

Comorbidity services in the Tampere area

Tampere is a town in central Finland with about 200,000 inhabitants, covering 690,382 square kilometres. Tampere is the third largest town in Finland. A little over a half of the population are women. Seventeen thousand of the population aged over 15 years old are studying at school, several educational facilities and the universities of Tampere. Of these, over two-thirds have obtained a degree after the 9 years compulsory basic education. Tampere is situated inland in between two lakes, Lake Näsijärvi and Lake Pyhäjärvi. One of the 15 refugee-centres in Finland is situated in the Tampere area. At the time of writing (2005), the 432 Finnish municipalities are responsible both for organising and implementing the substance abuse and mental health services. The entire population is covered by health insurance and certain mental illnesses entitle patients to free medication.

Tampere primary health care services are delivered at a local level in three service areas - western, eastern and southern service areas on the basis of the population. This means that services should be mainly administered in community settings close to the patients and clients in the primary care services formed by health care and social care services. The action is based on legislation. All Finnish citizens have access to care and health insurance. Certain somatic and mental illnesses entitle the patient to free medication, and the treatment given by mental health centres is free. The payment for primary care is usually on a yearly level of costs, differing in each municipality (€11 per visit in Tampere health care services, maximum €33 yearly). The social care services are delivered without payment by the client. All services are subsidised by the government or municipalities, and thus the client pays only part of the cost(s).

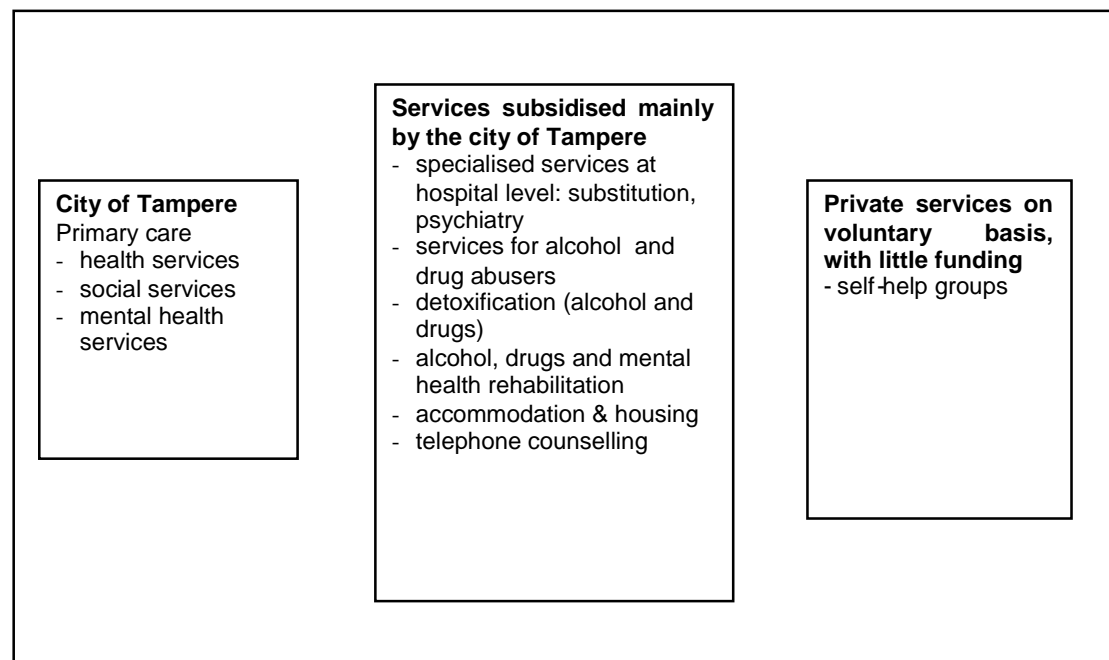
Most of the substance abuse services are provided by private care providers. The costs are mostly paid by the municipality, but they also have private

funding, e.g. from charities. At the moment the research on services (e.g., Lehto, 2002) indicates that service delivery is fragmented in the whole of Finland. In the Tampere area the services used by substance abusers can be divided into three types according to the source of funding (see Figure 9-1).

Primary care workers are not specially trained in substance issues. Their role is more one of directing clients into treatment provided by other services. The doctors and social workers are mainly responsible for sending referrals into psychiatry (doctors) or rehabilitation (social workers). The primary care services include telephone counselling for general health issues. There are several private telephone lines for special issues, such as drug abuse, mental health, HIV or violence, which are partly subsidised by the local city and partly by National Health trusts.

Mental health services are provided by the local city at the acute phase of illness and in specialised mental health centres and day hospitals. The greater part of rehabilitation services is provided by the private sector, where the main financier is the local city. Almost all substance abuse services are provided by private health trusts. They are dependent on local financing, which is decided upon on a yearly basis at the political level. This means that if demand is higher than the estimated supply of services, many drug abusers, alcoholics or persons with dual diagnosis may have problems with actually entering treatment because of a lack of resources.

Figure 9.1: Substance abuse and mental health services in the Tampere area of Finland



The municipality of Tampere pays also for hospital in-patient treatment, which is provided by Tampere University Hospital (TAUH), a district hospital set up jointly by all the municipalities in the region. The main reason for

hospitalisation due to substances is drug-related mental health disorders. Alcoholics with mental health problems are mainly treated by the private sector. There is also a yearly estimate of services financed by the city, which can mean that persons can get easier access to services at the beginning of the year. Before entry to a service the identity of a patient is checked. Only in the case of compulsory admissions can patients be taken to hospital without knowing their identity.

The Tampere area has been active in establishing developmental projects on both alcohol and drugs in relation to mental health. Some examples are given below.

- The Pirkanmaa Mental Health Project has several schemes, e.g. on case management and families in mental health settings. Studies on the epidemiological issues and the service mapping were started at 2000, covering all the municipalities (34) in the area. (See <http://www.pmh.info/ENGintroduction.htm>)
- "Greasing the chains". A project by the TAUH just finishing its second stage, funded originally to study a new group of psychiatric patients - drug users. It has conducted small-scale surveys and a follow-up study. These activities have led to a new project looking at issues such as collaboration, lack of knowledge etc. They have developed a "Passport of Care", which has undergone testing.
- Two wards at a nearby (Kaivanto) hospital set up for substance abusers with mental health problems, as a development of addiction psychiatry. One ward is focused on alcoholics and individual therapy, whereas the other concentrates mainly on drugs and family care.
- An NGO basing its work on the Minnesota model. Services are primarily for substance users, but in this sub-project they have incorporated the mental health assessment and support accordingly. When a client has a mental disorder in addition to substance problems, they are assessed by a psychiatrist and a nurse.
- The ALMA project is an NGO project providing housing facilities for dual diagnosis clients (mainly alcohol related) and giving support for patients in the areas of substance misuse, mental health, and rehabilitation provision. Research is also undertaken on clients' path through the care systems.

At the moment the local strategy in Tampere for substance abusers is undergoing modification. There seems to be a lack of detoxification places for clients wanting to enter treatment. There is also a lack of co-ordination of services, even though many of the service providers are collaborating and forming networks. Even so, the main challenge for development seems to be the point of entry to treatment. While responsibilities and priorities have been developed at a strategic level, this information has not yet been used for the benefit of clients. National epidemiological statistics have been guiding service development at the local level in the direction of more sensitive drug treatment interventions.

Data limitations

The statistics differ depending on the source of information. Drug misuse statistics are based on national surveys and misusers are often not covered by these surveys. Official Finnish statistics has been collected by different agencies and for different purposes; most numbers are only estimations. The statistics available vary depending on the substances of interest.

Conclusions

We can conclude that alcohol misuse is a serious health problem in Finland. At the same time, there was a steady increase in the use of drugs during the 1990s. The mental health disorders have not increased according to a nationwide Health 2000 study. The services at the local level follow the trends in substance and mental health disorders. The services are mainly delivered in community settings. Most of the services are paid by municipalities and service users only pay small sums themselves. In the future, if substance related disorders should increase, more emphasis should nationally be directed towards developing primary care, and the education of staff about comorbidity. There is little research data on dual diagnosis; this will need extra attention in the future.

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Chapter 10 Prevalence and treatment of comorbid psychiatric disorders in German opiate addicts

N Scherbaum

Summary

The prevalence of comorbid psychiatric disorders in opiate addicts was investigated in Germany in two studies using reliable instruments for diagnosis. About a quarter of patients had a current comorbid psychiatric disorder, mostly affective and anxiety disorders. In addition, about 60% had a comorbid personality disorder. The prevalence of psychiatric disorders in opiate addicts is much higher than in the general population in Germany. Clinical research in the treatment of comorbid disorders is rare in Germany. In a randomised controlled trial, conducted by the author, there was a lower concomitant drug use by opiate addicts in methadone maintenance treatment (MMT) after cognitive behavioural group therapy compared with patients in standard MMT.

Die Häufigkeit komorbider psychischer Störungen bei Opiatabhängigen wurde unter Verwendung standardisierter Erhebungsinstrumente in Deutschland in zwei Studien untersucht. Demnach litten etwa ein Viertel der Untersuchten aktuell unter einer psychischen Störung, meistens affektive oder Angststörungen. Zusätzlich wurde bei ca. 60% der Untersuchten eine Persönlichkeitsstörung diagnostiziert. Die Prävalenz psychischer Störungen ist bei Opiatabhängigen deutlich höher als in der Allgemeinbevölkerung. Klinische Forschung zur Behandlung komorbider psychischer Störungen ist selten in Deutschland. In einer eigenen kontrollierten und randomisierten Untersuchung hatten Opiatabhängige in Methadonsubstitutionsbehandlung nach einer kognitiv-verhaltenstherapeutischen Gruppenpsychotherapie einen geringeren Beigebruch als Opiatabhängige in Standardsubstitutionsbehandlung.

Epidemiological studies

The treatment of opiate addiction is difficult in itself; however it is further complicated by the fact that the majority of opiate addicts have comorbid mental and somatic disorders. Several studies were carried out in Germany in order to elucidate the prevalence and type of comorbid mental disorders in opiate addicts. The following selection criteria were used in the literature research for the inclusion of investigations in this review:

- Diagnosis according to DSM-III-R or ICD-9, or in accordance with further developments of these systems (DSM-IV or ICD-10).
- Diagnostic procedure according to a reliable instrument such as CIDI (Wittchen et al., 1993) or SKID (SKID = Strukturiertes Klinisches Interview für DSM-IV [Structured clinical interview for DSM IV], Wittchen et al., 1997).

Based on these criteria, two studies were carried out in Germany during the 1990s (MAGS, 1993; Krausz *et al.*, 1998).

Current comorbid mental disorders

In the MAGS study, 222 patients in the first 6 months of a methadone maintenance treatment programme were investigated based on the diagnostic system DSM-III-R. The majority (80%) of them were male; the average age was 32 years. In the study by Krausz *et al.* (1998), 350 opiate addicts in contact with the health care system for drug addicts were investigated. 42% of them were in maintenance treatment. The majority of patients were male (69%); the average age was 29 years. Diagnosis was established based on ICD-10.

The prevalence of current comorbid mental disorders (excluding other substance-related disorders or personality disorders) was 24% (MAGS, 1993) and 23% (Krausz *et al.*, 1998), respectively. The most prominent diagnoses in the MAGS study were affective disorders (16%) and anxiety disorders (5%). A small minority suffered from eating disorders and somatoform disorders. This result is very similar to the study by Krausz *et al.* (1998): the majority of comorbid mental disorders were affective (10%) and anxiety disorders (19%), a small proportion of patients suffered from eating disorders, schizophrenia and somatoform disorders.

Comorbid personality disorders

Personality disorders were diagnosed as well in the MAGS study (1993). The proportion of patients with at least one personality disorder was 58% (diagnosis of more than one personality disorder possible). The most frequently stated diagnoses were Narcissistic Personality Disorder (19.6% of all patients), Borderline Personality Disorder (12.2%), and Dependent Personality Disorder (8.7%).

Lifetime prevalence of comorbid mental disorders

In the study by Krausz *et al.* (1998), the lifetime prevalence of comorbid mental disorders was also investigated. The cumulative lifetime prevalence was 55%, and again affective and anxiety disorders were most prominent (32% and 43%, respectively, diagnosis of multiple comorbid disorders possible). The lifetime prevalence of mental disorders in this sample of opiate addicts was much higher than the lifetime prevalence in the general population in Germany. The TACOS study (Meyer *et al.*, 2000) investigated the lifetime prevalence of mental disorders in 4075 persons from the general population (50% male, ages 18-64). The diagnosis was established based on DSM-IV. The lifetime prevalence was much lower than in the sample of opiate addicts (30% vs. 55%), especially the lifetime prevalence for affective disorders (12% vs. 32%) and for anxiety disorders (15% vs. 43%). Personality disorders were excluded from the diagnostic procedure in this study. It is notable regarding the aetiological relationship between drug dependence and comorbid mental disorder, that in the study by Krausz *et al.* (1998), 52% of the anxiety disorders, 45% of affective disorders, 75% of eating disorders and

40% of schizophrenic disorders were manifested before the onset of drug addiction.

Co- morbid drug-related disorders

In addition to comorbid mental disorders, comorbid drug-related disorders have to be considered. In a study conducted by the author (Scherbaum *et al.*, 2005) evaluating cognitive behaviour group psychotherapy in maintenance patients, 59 out of 73 patients (83.1%) had a diagnosis of a further addiction disorder in addition to opiate dependence. Most important were polyvalent dependence (n = 46) and alcohol dependence (n = 19).

Treatment

The treatment of comorbid mental disorders is suggested in current German treatment guidelines for the treatment of opiate addiction (Havemann-Reinicke *et al.*, 2004). It is clinical common sense that patients with schizophrenia are treated with neuroleptic medication. In a similar vein, medication for affective and anxiety disorders is recommended. There are only a few specific in-patient units for dual diagnosis which address the treatment of patients with drug addiction and schizophrenia or severe personality disorders such as Borderline Personality Disorder. In contrast to the rather specific epidemiological data in Germany, there are only scant data regarding the evaluation of treatment strategies for opiate addicts with comorbid mental disorders.

The Essen research team carried out the above named study (Scherbaum *et al.*, 2005) evaluating cognitive-behavioural group therapy in opiate addicts in maintenance treatment. The aim of the group treatment was to reduce concomitant drug use. Inclusion criteria were opiate dependence and first episode of maintenance treatment. Exclusion criteria were shorter than 6 weeks or longer than 6 months of maintenance treatment, severe comorbid mental disorder such as schizophrenia, or social circumstances preventing participation in group psychotherapy, such as imminent incarceration. Over 2 years, 73 patients were included and randomly assigned to the intervention group (n = 41) and the control group (n = 32). There were no relevant differences between the intervention and control group regarding age, sex, duration of opiate dependence, comorbid drug related disorders, etc.

The control group was treated with the standard treatment which consisted of an integrative treatment within a multi-professional team (psychiatrist, psychologist, social workers and physician assistants). These patients had at least one individual treatment session per week with a psychiatrist or psychologist. Methadone was taken under supervision. After drug abstinence, as proven by urine testing over several weeks, take-home dosage was granted. The group psychotherapy was oriented to cognitive behavioural principles. Twenty treatment sessions (one per week) were outlined in a treatment programme. The meetings took place over 6 months and each session lasted about 90 minutes. The treatment was carried out by two specially trained therapists with external and internal supervision.

Psychotherapy was carried out in closed groups with 7-8 participants. Apart from group psychotherapy, the intervention group was treated as the control group.

The primary outcome criterion was the rate of drug positive urine screens over 5 randomised tests per month. Measuring times were the first month of study treatment, after 6 months of study treatment, and after a further 6 months of follow-up. Data analysis was carried out according to the 'intention to treatment' principle. In case of study drop-outs, the last available urine tests were used for the further analysis ('last observation carried forward' principle).

The retention rate in both groups over 52 weeks was similar at about 60%. Approximately half of the patients in the psychotherapy group participated in all group therapy sessions. There was a decrease in both groups of the percentage of drug positive urine tests between admission to maintenance treatment and the onset of study (from 100% to about 65%). In the further course of the study, the percentage remained unchanged in the control group and dropped to 45% at the end of intervention period and 29% at follow-up 6 months after the end of study treatment in the intervention group. The decrease of concomitant drug use in the intervention group was mainly attributable to a reduced use of cocaine. This decrease was particularly noticeable for patients who attended more than 10 sessions of the group psychotherapy, whereas patients who dropped out earlier had a similar amount of concomitant drug use to the control group.

Conclusions

According to epidemiological studies and clinical experience, comorbid mental disorders (including personality disorders and comorbid drug-related disorders) are a widespread problem in opiate addicts in Germany. Based on this epidemiological data, the evaluation of treatment strategies of comorbid mental disorders in opiate addicts is necessary, however such studies are rare and expensive. The treatment of comorbid mental disorders in drug addicts should be a focus of international co-operation in drug addiction research.

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Chapter 11 The Italian experience

(A) Drugs and psychosis in Italy: historical overview and recent perspectives

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Summary

This chapter is divided into three sections: the first describes the historical situation in Italy concerning the division between addictive behaviours organisations and the mental health system. The second section is an overview of Bergamo data and describes the formal agreement between the Department of Addictive Behaviours and Departments of Mental Health. Furthermore, some epidemiological data on patients with dual diagnosis that were referred to the Department are reported. The last section is a report on research conducted on comorbidity in ten different types of addictive behaviours.

Questo capitolo è diviso in tre sezioni. La prima descrive i presupposti storici della divisione che si è realizzata in Italia fra i servizi per le dipendenze ed il sistema della salute mentale. Nella seconda parte viene presentato il protocollo formale fra i Dipartimenti di Salute Mentale delle tre aziende ospedaliere ed il Dipartimento delle Dipendenze della Provincia di Bergamo. Inoltre vengono descritti alcuni dati epidemiologici sui pazienti con “doppia diagnosi” che hanno fatto riferimento al Dipartimento delle Dipendenze. Nell’ultima si riporta invece un piccolo lavoro di ricerca sulla comorbidità psichiatrica in dieci differenti comportamenti di ‘addiction’.

A - Historical background

Over the last few years in Italy the treatment of addictive behaviours has undergone a remarkable transformation: there has been a cocaine epidemic, for example, the arrival of new drugs, and in particular the phenomenon of polydrug abuse. Above all, however, it is the increase in the number of patients exhibiting problems of so-called dual diagnosis that has called for a change of perspective in both outpatient and inpatient treatment.

In Italy, the history of treating addictive behaviours is part of the history of psychiatry. Patients who used substances, especially alcohol, formed part of the spectrum of the population accommodated in psychiatric hospitals. In fact, asylums were places of treatment for all pathologies concerning behavioural problems and requiring social control, and psychiatrists were the specialists who were entrusted, among other things, with treating addictions.

In 1975, new legislation (law no. 685) sanctioned the separation of the cure of drug addiction and the treatment of psychiatric pathologies. This decision, which came to be regarded as the ‘withdrawal’ of Italian psychiatry from the

treatment of dependency, led to the setting up of specialist services to deal with the problem of drug addiction. These services, which over the years have taken several forms, have sometimes been ambiguous in their attempts to define the treatment of addiction pathology, passing from approaches to treatment that show traces of sociological explanations, to others where dependency finally attained the dignity of a pathology and has been able to aspire to scientifically validated treatments.

The mandate to treat addictive behaviours that was awarded to drug addiction units by legal decree (309/90) gave a great impetus to therapy for these pathologies. It also initiated a laborious process of clinical research in order to define areas of intervention in addiction medicine. Yet there is still a division of expertise in the Italian National Health Service so far as the treatment of dependency and psychiatric pathology is concerned. Over the course of the years, this has led to a lack of collaboration between psychiatric services and services for addictive behaviours that, at one extreme, have made the problem worse, with a sort of bouncing backwards and forwards of more critical situations.

In the 1990s, the dissemination of American texts on the treatment of substance abuse and dependency, and the use and spread of the DSM as a diagnostic tool, contributed to the renewed interest of Italian psychiatry in dependency. This was preceded by the increasing interest of drug addiction unit health workers in the psychiatric aspect of substance abuse.

Psychiatrists increasingly find themselves diagnosing in their patients situations of abuse or dependency from which the necessity of a clinical intervention first arose. Any such intervention must necessarily overcome the differentiation between primary or secondary psychiatric problems linked to substance abuse. Such a distinction is essential for a correct definition of patients with dual diagnosis and remains fundamental from the perspective of scientific research.

It should be remembered that, in international publications, the definition of a patient with dual diagnosis is a subject in whom both a psychiatric problem and a concomitant problem of substance abuse can be diagnosed on DSM Axis I. In this sense, the DSM (APA, 1994) turns out to be more suitable for diagnostic purposes than ICD-10 (WHO, 1992), which adopts a cause and effect approach to substance abuse and psychological problems - not one of the possibilities presented to the clinician. In fact, unlike the DSM, the ICD system does not consider substance abuse problems to be an inherent psychiatric problem (Pancheri, 2002).

In our opinion, it is necessary to return to the clinical need of integrating the treatments precisely because the historical division between departments of mental health and those of addictive behaviours is an obstacle preventing expert treatment from being provided by a single department.

It is therefore necessary to set up collaborative relationships that are fundamental at an institutional level. The need to integrate treatments, which comes from an awareness on the part of the services of the increase in

quantitative terms of the phenomenon, as well as practical management considerations, must also be regulated by the allocation of precise treatment responsibilities. This is certainly rendered difficult by clinical, institutional and historical factors - which is why the term 'dual diagnosis' is often synonymous with the term 'double trouble'.

From an institutional point of view, however, the problem of treating patients with so-called 'dual diagnosis', starting from the requirements of clinical management, has come to the attention of legislators. For example, a recent law introduced by the region of Lombardy (Regional Accreditation for Addiction treatment Units) makes a clear request for collaboration with mental health departments (see DGR 12621 of 7 April 7 2003 'Determinazione dei requisiti standard per l'autorizzazione al funzionamento e l'accreditamento dei servizi pubblici e private per l'assistenza alle persone dipendenti da sostanze lecite ed illecite' for further information). In addition, the Objective Plan for Psychiatry in Lombardy (DGR VII/17513 of 17 May 2004 'Piano regionale triennale per la salute mentale') refers specifically to the treatment of patients with dual diagnosis, exhorting reciprocal collaboration and therefore recognising the increasing importance of the phenomenon. All this would seem to favour setting up a process of collaboration that, taking into account the history and nature of the various services, is capable of leading to real integration. A tool that would seem helpful in setting up, developing and improving this sort of collaboration is that of formal interdepartmental agreements.

The Department of Addictive Behaviours in Bergamo was one of the first in Italy to undertake this task, formalising an agreement with the various departments of mental health in the Region. This agreement, which has been in force since 2000, has resulted in a significant improvement in our understanding of patients, in the quality of treatment, and in the relationship between the organisations involved.

The number of patients who are dealt with by both services is increasing, and the practice of joint clinical management has improved the collaborative relationships between the health workers, as well as initiating a debate on the treatments. This debate is increasingly involving another historical Italian resource for the treatment of dependency: therapeutic practitioners operating in the private sector, who are opening more and more specialist centres dedicated to this type of patient.

The concept of a formal interdepartmental agreement seems to be spreading: there have been requests for information about our agreement from services in other regions of Italy, and the Veneto Region has recently started a research project aimed at drawing up a collaborative agreement that will be valid across the territory.

In our opinion, once set in motion and bound by the obvious rigidities of a formal agreement, collaboration and the exchange of clinical information between health workers in the two different fields results in the accumulation of common knowledge and of examples of effective treatment procedures. In fact, shared experience has already given rise to a form of clinical practice

that allows for the use of different methods of treatment in the area of dual diagnosis.

Methods in comorbidity therapy

Three methods of treatment are currently the most commonly used in comorbidity therapy: the so-called 'parallel' method, the 'serial' method - in which one treatment follows the other - and the 'integrated' method.

In the serial method of treatment, difficulty derives from the fact that the patient is first treated and stabilised for the problem that appears most acute and is only passed on to the other service at a later stage, which means that the patient risks being treated in a separate manner for the two problems. This method carries the risk of not considering the close connections between the two problems, as is often noted, for example, in some psychiatric pathologies, where substance abuse or dependency represents an unsatisfactory attempt at self-therapy, making it difficult to consider therapies that separate and differentiate between the two problems. This method of treatment seems more practicable in other medical specialisations where pathologies, although connected, do not always display the connection evident in comorbidity.

Parallel treatment attempts to overcome the difficulties of the serial treatment method, as far as priorities or acuteness is concerned, and means that the patient is simultaneously treated for both problems by both services. This type of treatment, however, often runs into the obstacle of fundamental differences in the formulation of the services: different roles, different methods, and different treatments available. The results are not encouraging, especially if the level of interaction and communication between the agencies is poor.

Integrated treatment, which emerged at the end of the 1980s in order to overcome the difficulties of the two methods of treatment above, envisages that the patient is treated for both problems by the same therapist or the same team, eliminating both the inconvenience for the patient of having to attend two services and the differences and the contrasts between the services themselves (Fioritti and Solomon, 2002). As far as outpatient treatment is concerned, it seems that although this latter method has not been proven to be more effective than the other two, it has been proven to be just as effective. It is, however, the most expensive and the most difficult to set up, as it requires a special treatment team and a specific site, which is difficult to establish in a single location, especially in Italy, because of the historical evolution of the services. However, from the point of view of evidence-based medicine, the integrated method has shown real effectiveness, especially in inpatient-based treatments where it is easier to integrate the team as professional figures, and where there is obviously just one site.

It might seem superfluous to add that efforts to cultivate a shared knowledge and develop treatments that are appropriate for patients with psychiatric comorbidity must be encouraged to form part of the culture of 'care in the community'. However, departments of Addictive Behaviours, as structured by the law of accreditation in the Lombardy region, are perfectly placed to direct such an operation. It is clear, though, that what is necessary, whether in the

public or private sectors, is a training process that allows an acquaintance with the problems and needs of various cases, and acquaintance with the intrinsic limits of the respective treatments, not feeding fantasies of omnipotence or delusions of impotence, but helping to bring about a real integration of the cultures and their knowledge. Even if integration in the sense of jointly treating a single patient turns out to be unthinkable, integration of knowledge is possible and desirable, and to a certain extent this has already been achieved.

Epidemiological studies

Epidemiological studies are all recent enough, but not unambiguous in measuring the state of the phenomenon. In fact, if one uses the concept of dual diagnosis in a wide sense (including in the definition all the psychiatric diagnoses linked to the addictions, as well as problems on Axis II) the values are elevated. If the sample is measured in a more restrictive way (only including diagnoses on Axis I, or excluding the so-called substance-induced problems) the values are much lower.

In other words, it is the definition of 'dual diagnosis' that needs to be more specific because, while it may be useful from a clinical point of view not to differentiate between primary psychological problems and induced problems, restricting the concept of dual diagnosis to patients whose psychological pathology predates the addictive behaviour is limiting from a more rigorous scientific point of view. Furthermore, in some cases where the problem is on Axis II rather than Axis I, so not strictly included in the definition of dual diagnosis, the result, from the point of view of managing the treatment, is often levels of extreme difficulty and a worse prognosis.

On this subject, there follows a small contribution to the current debate in psychiatric circles concerning the maintenance or abolition of the DSM Axis II wherever Axis II problems can be considered as accentuated Axis I problems (Pancheri, 2002). It is essential - and this is the crux of the matter - to improve the diagnostic abilities for both psychiatric pathology and the diagnosis of dependency or abuse, which is often taken for granted, not always diagnosed correctly, under-rated, or labelled with the generic definition of 'substance abuse' that does not correspond to a DSM diagnostic definition.

Apart from having the advantage of being a reliable, well-known and widely shared tool, DSM-IV offers, if it is taken advantage of to the full, the possibility of measuring the level of seriousness of the problems through use of Axis IV and Axis V. Often forgotten or neglected, these can be useful prognostic indicators, and suitable tools for choosing an appropriate treatment. In fact, as the number of diagnoses is limited, it is often the measure of global assessment of functioning that can give useful information on the seriousness of the condition and on which type of treatment to focus.

The use of validated scales of assessment is also recommended. Apart from helping in the formation of the diagnosis, these can 'measure' the symptomatic course of the problem over a period of time. In fact, the

Department of Addictive Behaviours in Bergamo has been using SCL90 (De Rogatis *et al.*, 1983) for years as part of the diagnostic assessment of its patients. As the scale is limited to checking for a series of symptoms, and does not have any diagnostic claims, it has the advantage of being quick and therefore easy to use, presenting no difficulties or obstacles either to the health worker or patient. Of course, it cannot take the place of more complete scales, such as the SCID (Spitzer *et al.*, 1988, 1990, 1992), which because of its intricacy is more complicated to use on a day-to-day clinical basis.

At the beginning we mentioned the need for a serious and rigorous epidemiological approach in order to evaluate the nature of the phenomenon. It is equally necessary to set up long-term studies into the effectiveness and the efficiency of the treatments. These should go hand in hand with research into reliable and measurable indicators of results. This research should involve both the addictive behaviours services and the therapeutic community, who must necessarily accept being increasingly involved in the concept of measurement based on common and scientifically validated diagnostic parameters.

Finally, it would seem opportune to recall some principles that can improve the treatment of a complex pathology that brings with it a great number of relapses and therapeutic failures. These should not discourage, and, above all, it is only if the patient's situation is known by every member of the treatment team that it is possible to arrive at the most useful and coherent form of treatment at any given time. Even if this treatment should turn out to be more expensive, economic criteria cannot be to the detriment of quality (Milesi and Clerici, 2000).

B - Formal agreement between the Bergamo Department of Addictive Behaviours and Departments of Mental Health

The Department of Addictive Behaviours in Bergamo deals with various types of abuse and dependency-related problems in its six drug addiction units. In addition to the treatment of drug and alcohol abuse or dependency, treatments have been added for eating disorders (DCA), nicotine addiction and pathological gambling (GAP) over the years.

The number of patients in 2003 being treated was 3,797 (up 91% on 1993), increasing progressively as has the number of the subjects within each group. The presence of an increasingly significant proportion of patients with 'dual diagnosis' - i.e. patients who exhibit both addictive behaviours and psychiatric problems, and who often require specialist help for both pathologies - has made it necessary to define a working agreement between departments of addictive behaviours and mental health. The agreement takes into account the different levels of seriousness, and also the degree of help that the type of diagnosis and the seriousness of the psycho-pathological picture demand.

The purpose of the agreement was to facilitate and improve the therapeutic and operative management of these patients. It aimed to define:

- The roles and functions of both departments.
- Methods of reciprocal referral and the exchange of diagnostic appraisals;
- Methods of facilitated access to the relative services.
- The service responsible for case management on the basis of the diagnostic indicators.

The agreement has been in force since 2000. From the internal monitoring and verification of its application, the following data have emerged.

Figure 11.1: Number of dual diagnosis patients referred to Addiction Units / Psychiatric Services in Bergamo, 2000-3

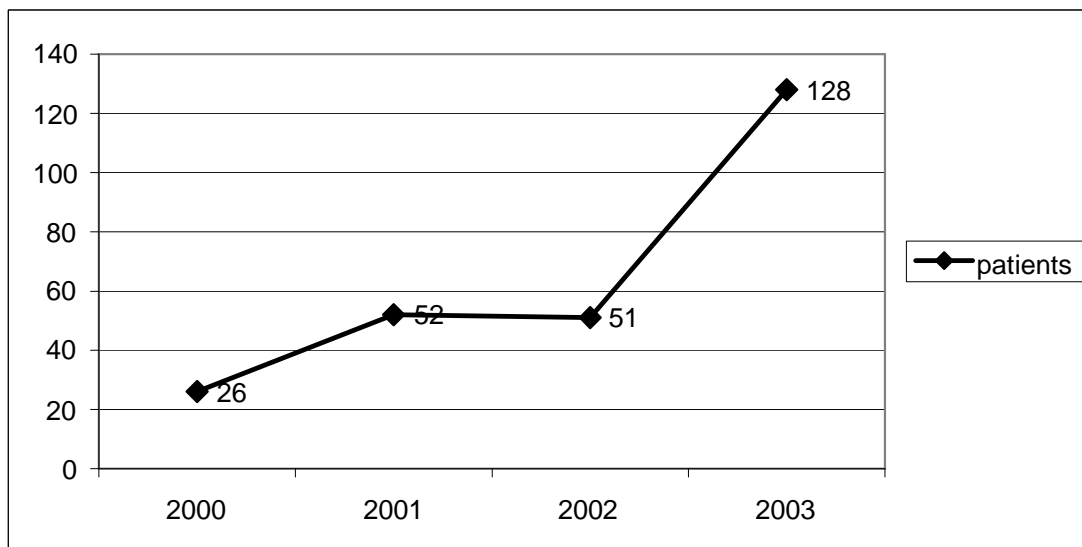


Figure 11.1 shows that from 2000 to 2003, the number of new patients subjected to a diagnostic appraisal by the two departments due to suspected co-existence of addictive behaviours and psychiatric problems progressively increased, with evidence of exponential increases (+100% in 2001 compared to 2000 and +150% in 2003 compared to 2002).

Table 11.1: Referral of new subjects with dual diagnosis by type of service making the referral, Bergamo, 2001-3

| Year | Service making the referral | | | |
|------|-----------------------------|----|----------------------|----|
| | Drug addiction units | | Psychiatric services | |
| | Number | % | Number | % |
| 2001 | 31 | 71 | 13 | 29 |
| 2002 | 24 | 47 | 27 | 53 |
| 2003 | 61 | 47 | 67 | 53 |

In 2003 94% (121 out of 128) of cases subjected to a combined diagnostic appraisal by the two departments had the presence of a dual diagnosis (addictive behaviour and psychiatric problems) confirmed (Table 11.1). Of these, 52% were patients with a psychiatric diagnosis who were being treated by psychiatric services and were referred to drug addiction units due to the suspected presence of an addiction problem. Seventy-three per cent were male.

Table 11.2: Proportion of new patients with dual diagnosis treated by drug addiction units, by type of treatment, Bergamo, 2001- 3

| Year | Type of treatment | | | | | |
|------|----------------------------------|--------|-----|----------------------------------|--------|-----|
| | Drug addiction units | | | Therapeutic communities | | |
| | New patients with dual diagnosis | | | New patients with dual diagnosis | | |
| | Total treated | | | Total treated | | |
| | Number | Number | % | Number | Number | % |
| 2001 | 3327 | 44 | 1.3 | 330 | 17 | 5.1 |
| 2002 | 3801 | 48 | 1.2 | 405 | 18 | 4.4 |
| 2003 | 3797 | 121 | 3.1 | 369 | 32 | 8.7 |

The incidence of subjects with dual diagnosis out of the total number of subjects treated in drug addiction units more than doubled (Table 11.2). The same is true for the rate of incidence among those being treated as inpatients in therapeutic communities.

Table 11.3: Proportion of new patients with dual diagnosis treated as in-patients Bergamo, 2001-3

| Year | Total number of new patients with dual diagnosis | Subjects with dual diagnosis being treated in therapeutic communities | |
|------|--|---|-------|
| | | Number | % |
| 2001 | 44 | 17 | 38.63 |
| 2002 | 48 | 18 | 37.5 |
| 2003 | 121 | 32 | 26.4 |

Source: Azienda Sanitaria Locale di Bergamo

If new subjects with dual diagnosis who have been receiving a treatment in therapeutic communities are considered, when faced with the significant levels of intensity of help demanded by the type of diagnosis and the seriousness of the psycho-pathological picture, there has been a drop in the percentage receiving this kind of treatment (Table 11.3). Such data realistically reflect a greater ability to treat outpatients, when supported by the participation of a network, set up by the drug addiction units and psychiatric services, that overcomes the functions of containment required by inpatient treatment.

Table 11.4: New subjects with dual diagnosis by diagnosis of addiction and service making the referral, Bergamo, 2003

| | Service making the referral | | DCA | GAP |
|----------------------|-----------------------------|-----------------------------|-----|-----|
| | Drug abuse or dependency | Alcohol abuse or dependency | | |
| Drug addiction units | 46 | 10 | 1 | 1 |
| Psychiatric services | 26 | 33 | 4 | 0 |
| Total | 72 | 43 | 5 | 1 |

Out of those subjects who were confirmed with a dual diagnosis (121 subjects out of 128 referred) 59% were drug addicts (79% diagnosed with dependency), 35% alcoholics (63% with a diagnosis of dependency), 4% were patients with an eating disorder (DCA) and 1% were gamblers (GAP) (see Table 11.4). Three-quarters (77%) of the alcoholics and 80% of the subjects with eating disorders came from psychiatric services.

Table 11.5: Proportion of new patients with dual diagnosis dealt with by drug addiction units, by type of addiction diagnosis, Bergamo, 2003

| Addiction diagnosis | Patients treated | New patients with dual diagnosis | |
|---------------------|------------------|----------------------------------|-----|
| | Number | Number | % |
| Drug addiction | 2,857 | 72 | 2.5 |
| Alcoholism | 679 | 43 | 6.3 |
| DCA | 130 | 5 | 3.8 |
| GAP | 32 | 1 | 3.2 |

The greatest incidence of dual diagnosis amongst those treated by drug addiction units is alcoholism (6.3%), followed by gambling (GAP) at 3.8%, and eating disorders (DCA) at 3.2%. The incidence for drug addiction is 2.5% (Table 11.5).

Table 11.6: New subjects with dual diagnosis by gender and age-group, Bergamo, 2003

| Gender | Age group (years) | | | | | | | | | | |
|--------|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|------|-----|
| | < 15 | 15 - 19 | 20 - 24 | 25 - 29 | 30 - 34 | 35 - 39 | 40 - 44 | 45 - 49 | 50 - 59 | > 60 | All |
| Male | 0 | 2 | 6 | 20 | 17 | 20 | 12 | 3 | 8 | 1 | 89 |
| Female | 0 | 1 | 4 | 2 | 7 | 4 | 4 | 5 | 3 | 2 | 32 |
| Total | 0 | 3 | 10 | 22 | 24 | 24 | 16 | 8 | 11 | 3 | 121 |

With males at 73.5% and females at 26.5%, an analysis of the male-female ratio is extremely interesting (Table 11.6). In subjects with dual diagnosis the male-female ratio is 2.7:1, whereas among the general population referred to the Department of Addictive Behaviours it is 4.1:1. This statistic can be read as evidence of a greater psycho-pathological vulnerability among females, or a greater exposure to the risk of psychiatric problems. As far as age is concerned, the most highly represented age band is 25-44 (58%), with a further 11%, being made up of subjects aged 15-24. The higher age bands of 50-59 (9%) and > 60 (2.5%) are composed of alcoholics.

Overall, among drug addicts and alcoholics, 27% were diagnosed with the abuse of psychoactive substances (Table 11.7 and Figure 11.2); this compares to 37% of alcoholics and 21% of drug addicts when considered separately.

Table 11.7: New subjects with dual diagnosis by type of diagnosis, Bergamo, 2003

| Addictive Behaviour | Psychiatric diagnosis | | | | | | | | | | | Total |
|---------------------------|-----------------------|------------------|---------------|----------------------|-----------------------------|--------------------|---------------------------------|-------------------|---------------|---------------------|---------------|-----------|
| | Borderline | Anxiety disorder | Mood disorder | Personality disorder | Severe personality disorder | Psychotic disorder | Drug-related psychotic disorder | Psychotic episode | Not specified | Delusional disorder | Schizophrenia | |
| Alcohol abuse | 0 | 0 | 7 | 3 | 4 | 0 | 0 | 0 | 0 | 0 | 2 | 16 |
| Alcohol dependence | 0 | 1 | 12 | 5 | 6 | 0 | 2 | 0 | 0 | 0 | 1 | 27 |
| Alcohol dependency | 0 | 1 | 19 | 8 | 10 | 0 | 2 | 0 | 0 | 0 | 3 | 43 |
| Drug abuse | 0 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 15 |
| Drug dependency | 1 | 3 | 9 | 11 | 10 | 6 | 7 | 0 | 3 | 3 | 4 | 57 |
| Drug dependency | 1 | 5 | 13 | 13 | 10 | 6 | 7 | 0 | 6 | 3 | 4 | 72 |
| Eating disorder | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 5 |
| Gambling | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 1 | 6 | 33 | 23 | 21 | 6 | 9 | 2 | 6 | 3 | 11 | 121 |

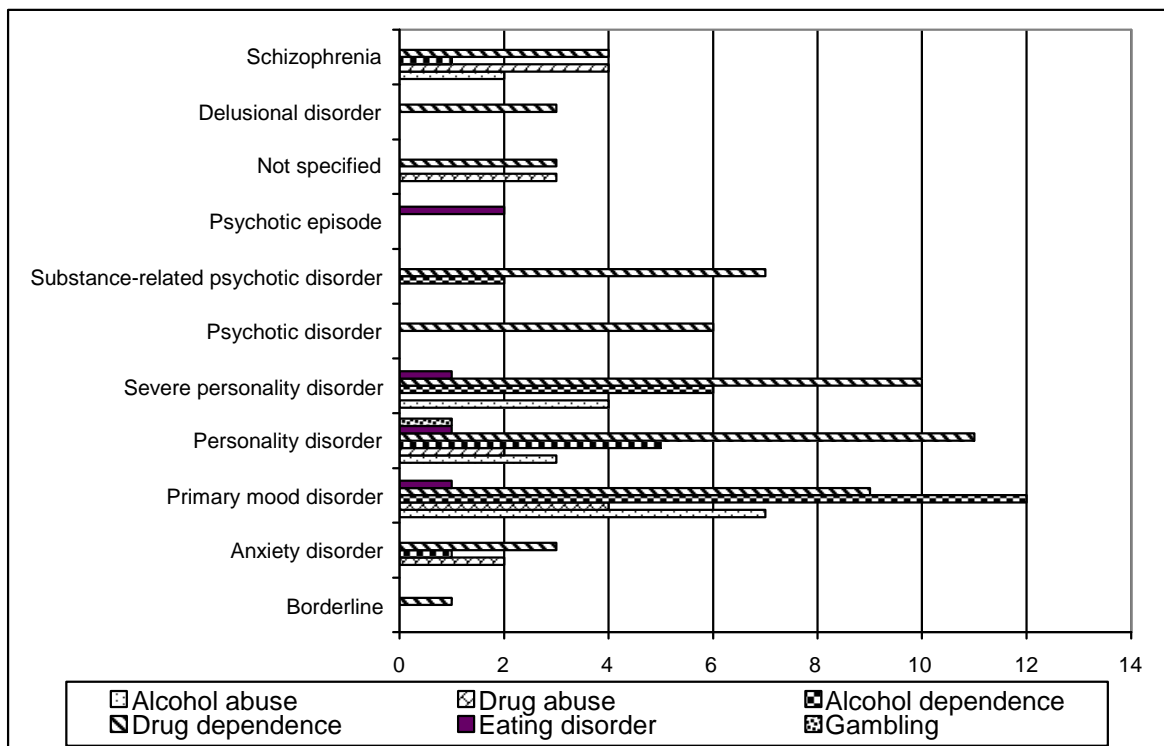
Figure 11.2: New subjects with dual diagnosis by type of diagnosis, Bergamo, 2003

Table 11.8: New subjects with diagnoses of addiction and psychiatric problems, Bergamo, 2003

| | Psychiatric diagnosis | | | | | | | | | | | |
|-------------------------|-----------------------|------------------|---------------|----------------------|-----------------------------|--------------------|---------------------------------|-------------------|---------------|---------------------|---------------|-------|
| Diagnosis of dependency | Borderline | Anxiety disorder | Mood disorder | Personality disorder | Severe personality disorder | Psychotic disorder | Drug-related psychotic disorder | Psychotic episode | Not specified | Delusional disorder | Schizophrenia | Total |
| Alcohol dependence | 0 | 1 | 19 | 8 | 10 | 0 | 2 | 0 | 0 | 0 | 3 | 43 |
| Drug dependence | 1 | 5 | 13 | 13 | 10 | 6 | 7 | 0 | 6 | 3 | 4 | 72 |
| Eating disorder | 0 | 0 | 1 | 1 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 5 |
| Gambling | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Total | 1 | 6 | 33 | 23 | 21 | 6 | 9 | 2 | 6 | 3 | 11 | 121 |

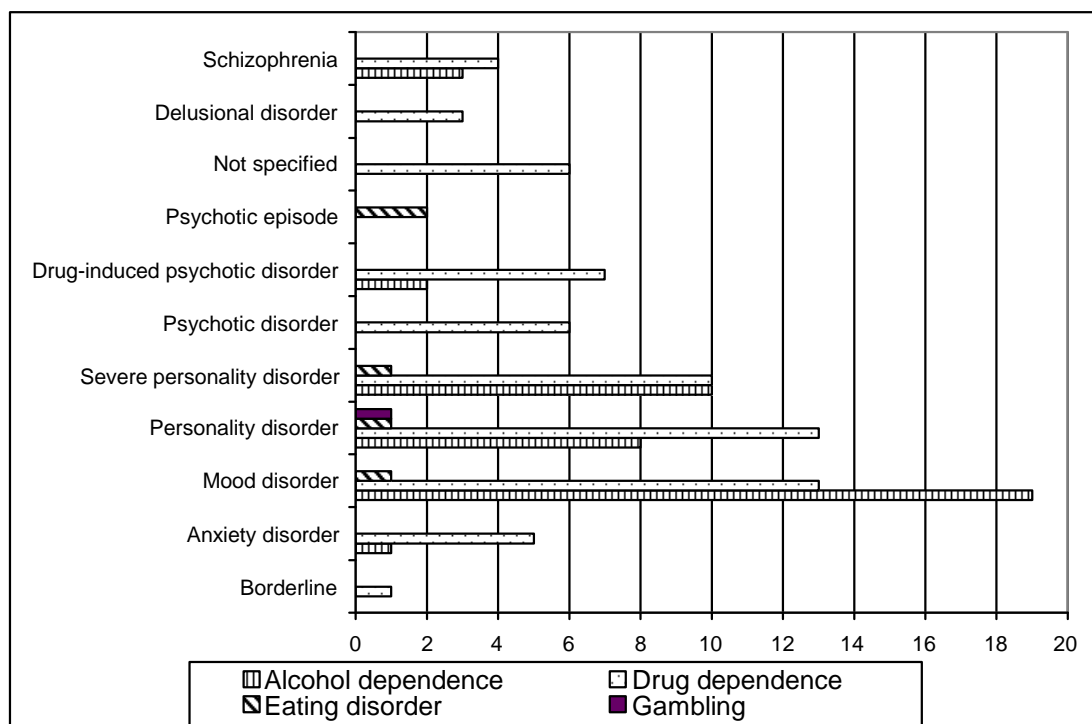
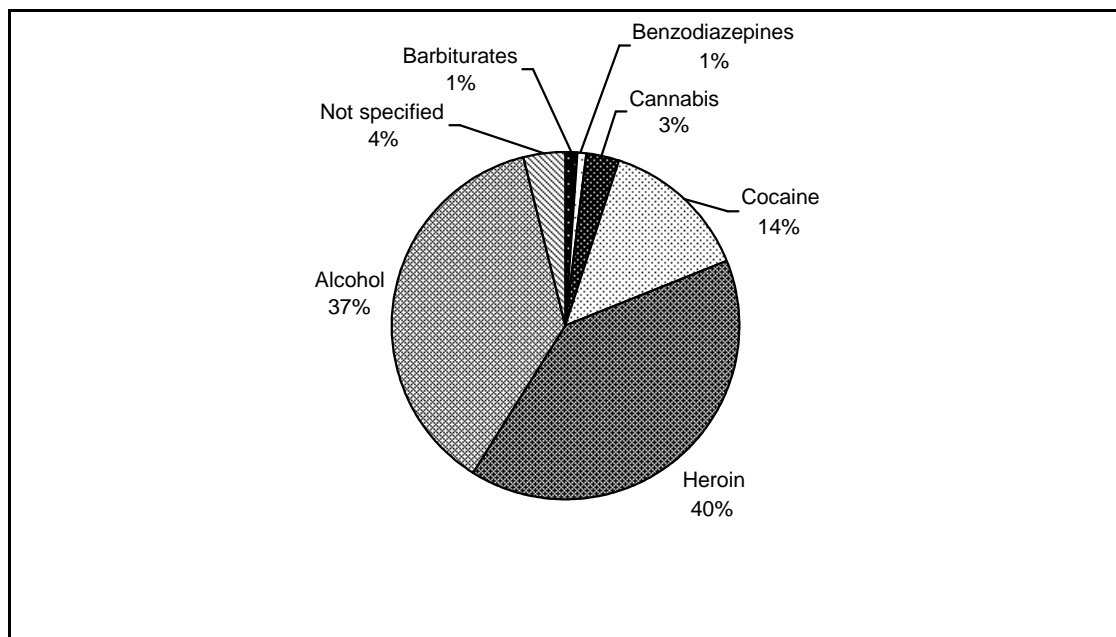
Figure 11.3: New subjects with diagnoses of addiction and psychiatric problems, Bergamo, 2003

Table 11.8 and Figure 11.3 show that excluding from the total the number of subjects who also had the presence of a psychiatric diagnosis confirmed - this was not specified in the survey - 28% have a diagnosis of mood disorder (57% alcoholics), 20% exhibit personality disorders (56% drug addicts), 18%

exhibit severe personality disorders, and 10% exhibit schizophrenia (73% drug addicts). Diagnosis of psychotic disorders induced by substances (8%) is reported to be prevalent in subjects with a diagnosis of drug dependency (78%). Diagnoses of psychotic disorders (5.2%) and delirious syndromes (2.6%) are reported only in drug-dependent subjects. There is evidence of a prevalence of cases with psychiatric comorbidity associated with Axis I.

Figure 11.4: New drug-addicted or alcoholic subjects with dual diagnosis by type of substance of primary abuse, Bergamo, 2003



Excluding from the total number of subjects considered (115) those for whom it has not been possible to identify the substance being abused (5), the substances with the greatest prevalence are heroin (46%) and alcohol (43%), followed by cocaine (16%), see Figure 11.4.

The incidence of new drug- or alcohol-dependent subjects with dual diagnosis, by primary substance of abuse, demonstrates a rate of new subjects with dual diagnosis of 6.3% among alcoholics, 4.3% among cocaine addicts, 2.3% among heroin addicts and 0.6% among cannabis users (Table 11.9 and Figure 11.5).

Table 11.9: New drug- or alcohol-dependent subjects with dual diagnosis, by psychiatric diagnosis and primary substance of abuse, Bergamo, 2003

| Psychiatric diagnosis | Primary substance of abuse | | | | | | | |
|--|----------------------------|----------------|----------|---------|--------|---------|---------------|-------|
| | Barbiturates | Benzodiazepine | Cannabis | Cocaine | Heroin | Alcohol | Not specified | Total |
| Borderline | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Anxiety disorder | 0 | 0 | 0 | 2 | 3 | 1 | 0 | 6 |
| Mood disorder | 0 | 0 | 0 | 4 | 8 | 19 | 1 | 32 |
| Personality disorder | 0 | 1 | 1 | 1 | 10 | 8 | 0 | 21 |
| Severe personality disorder | 0 | 0 | 0 | 1 | 6 | 10 | 3 | 20 |
| Psychotic disorder | 0 | 0 | 0 | 2 | 4 | 0 | 0 | 6 |
| Drug-related psychotic disorder | 0 | 0 | 1 | 1 | 4 | 2 | 0 | 8 |
| Not specified | 1 | 0 | 0 | 2 | 2 | 0 | 1 | 6 |
| Schizophrenia | 0 | 0 | 1 | 3 | 5 | 3 | 0 | 12 |
| Delusional disorder | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| Subjects being dealt with for substance being primarily abused | 0 | 8 | 498 | 370 | 1930 | 679 | 0 | 3485 |
| All subjects with psychiatric diagnosis | 1 | 1 | 3 | 16 | 46 | 43 | 5 | 115 |
| % | - | 12.5 | 0.6 | 4.3 | 2.3 | 6.3 | - | 0.03 |

Figure 11.5: New drug- or alcohol-dependent subjects with dual diagnosis, by psychiatric diagnosis and primary substance of abuse, Bergamo, 2003

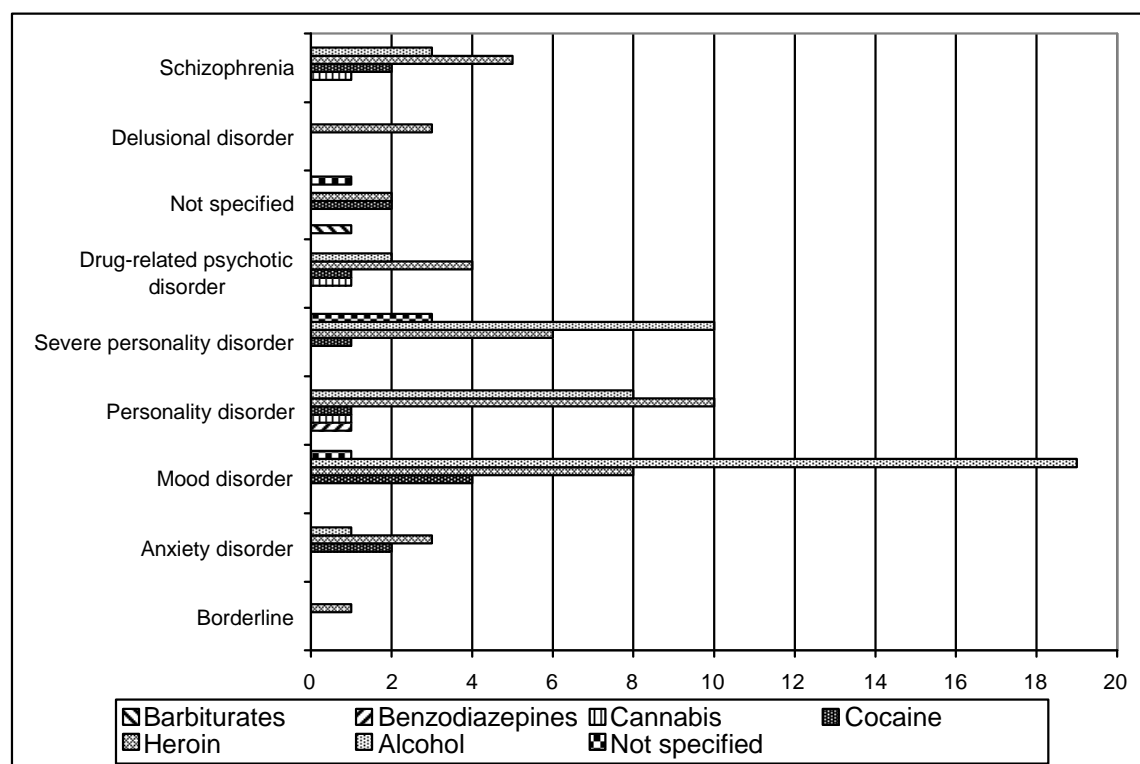


Table 11.10: New subjects with dual diagnosis by type of unit responsible and type of unit offering residential care, Bergamo, 2003

| Type of unit offering residential care | Taken on by C.P.S./Drug Addiction Unit | Taken on by C.P.S./Drug Addiction Unit | Taken on by Drug Addiction Unit in consultation with C.P.S. | Total |
|--|--|--|---|-------|
| | Male | Female | Male | |
| Psychiatric Unit | 2 | 0 | 0 | 2 |
| Drug Dependency Unit | 3 | 0 | 0 | 3 |
| Drug Dependency Unit / Dual Diagnosis | 16 | 3 | 7 | 26 |
| Not accredited | 1 | 0 | 0 | 1 |
| Overall totals | 22 | 3 | 7 | 32 |

Out of the total number of new subjects with double diagnosis, 26% received inpatient treatment (Table 11.10): 33% of male subjects and 9% of female subjects. Four-fifths (78%) had a course of combined treatment (drug addiction units / psychiatric services). A similar proportion (81%) of inpatient treatments was initiated using structures designed for the treatment of subjects with psychiatric comorbidity. Only 9.3% were placed in structures suitable for just the treatment of drug dependency despite combined responsibility. The recourse to specialist inpatient services for this type of user could be interpreted as a reaction to the seriousness of individual cases and the intensity of help required. On the contrary, the low percentage of subjects placed in 'simple' inpatient structures (suitable for just the treatment of alcohol or drug dependency) could indicate the co-existence of the two problems, but is not necessarily indicative of either a need for specialist inpatient help, or inappropriate placement.

C - Prevalence and severity of psychiatric comorbidity in ten types of addictive behaviours

Summary

The prevalence and the severity of psychiatric comorbidity in ten different types of addictive behaviours is described and compared. The problems analysed are heroin dependency (H), cocaine dependency (C), alcohol abuse (AA), alcohol dependency (AD), nicotine dependency (N), anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorders (BED), eating disorders not otherwise specified (EA-NOS), and pathological gambling (G). The screening of the psychiatric pathology was carried out using SCL90-R. (De Rogatis *et al.*, 1983)

Introduction

The Department of Addictive Behaviours in Bergamo treats different types of abuse or dependency problems in its six drug addiction units. In addition to the treatment of dependency on illegal substances and alcohol, outpatient departments for the treatment of eating disorders (1997), nicotine dependency (1996) and, more recently, pathological gambling (2000) have been set up over the course of the years. One element of the admission procedures for all the types of patient is the screening of psychiatric pathology, using different validated assessment scales. Because it is quick and easy to administer, SCL90-R is always used, even with patients who have very little contact with the units. It is therefore a suitable tool for epidemiologic screening and follow-up assessment.

Numerous studies have assessed and described psychiatric comorbidity in dependency on illegal substances and alcohol (Regier *et al.*, 1990; Rounsaville *et al.*, 1991). Studies of neurotransmitters linked to pleasure and gratification circuits, and the concepts of tolerance, dependency and craving have assumed a central importance in many areas of psychopathology (eating disorders (Herzog *et al.*, 1992; Yanovsky *et al.*, 1993,) pathological gambling (McCormick *et al.*, 1984) compulsive risk-taking behaviour, etc). These days, the aetio-pathogenetic aspects of abuse and dependency behaviour are very well known and reproducible for all substances and some behaviours.

Methods

We studied 197 patients spread across ten different diagnostic categories according to DSM-IV criteria (APA, 1994) from 1 January 2004 for 3 months. We included in each group the first patients to present themselves requesting treatment who were in the psycho-physical condition necessary to carry out the entrance test: heroin dependency (H=15), cocaine dependency (C=12), alcohol abuse (AA=13), alcohol dependency (AD=30), nicotine dependency (N=30), anorexia nervosa (AN=19), bulimia nervosa (BN=17), binge eating disorders (BED=11), eating disorders not otherwise specified (EA-NOS=20) and pathological gambling (G=30). In order to assess the patients we have used Symptoms Check List SCL-90- R (De Rogatis, 1983; Mercier *et al.*, 1992) a self-assessment test of 90 questions. We have estimated the general prevalence of psychiatric comorbidity (DSM IV Axis I) and have analysed the general prevalence of pathological scores in every group and the average pathological results (> 1).

*Results***Table 11.11: The prevalence of pathological scores in at least one area (score >1) per group, Bergamo, January-March 2004**

| Diagnostic category | Prevalence of psychiatric comorbidity (%) |
|--|---|
| Heroin dependence | 80.00 |
| Cocaine dependence | 72.72 |
| Alcohol abuse | 38.46 |
| Alcohol dependence | 61.53 |
| Nicotine dependence | 46.66 |
| Anorexia nervosa | 78.94 |
| Bulimia nervosa | 100.00 |
| Binge eating disorders | 90.90 |
| Eating disorders not otherwise specified | 85.00 |
| Pathological gambling | 55.17 |

Table 11.12: Pathological score by diagnostic category, Bergamo, January-March 2004

| | SOM | | OC | | IS | | DEP | | ANX | | HOS | | PHOB | | PAR | | PSY | |
|-----|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|--------------|---------|-------|---------|--------------|---------|--------------|---------|
| | Prev% | Average | Prev% | Average | Prev% | Average | Prev% | Average | Prev% | Average | Prev% | Average | Prev% | Average | Prev% | Average | Prev% | Average |
| H | 53,33 | 1,77 | 73,33 | 1,56 | 40,00 | 1,81 | 66,67 | 1,79 | 46,67 | 2,01 | 20,00 | 2,61 | 20,00 | 2,14 | 40,00 | 1,91 | 26,67 | 1,62 |
| C | 45,45 | 1,58 | 54,55 | 1,68 | 45,45 | 1,42 | 36,36 | 1,86 | 45,45 | 1,48 | 36,36 | 1,50 | 0,00 | 0,00 | 27,27 | 1,42 | 27,27 | 1,40 |
| AA | 7,69 | 1,17 | 23,08 | 1,13 | 7,69 | 1,78 | 7,69 | 1,23 | 7,69 | 1,30 | 7,69 | 1,17 | 0,00 | 0,00 | 7,69 | 1,17 | 0,00 | 0,00 |
| AD | 34,62 | 1,74 | 42,31 | 1,60 | 19,23 | 1,69 | 42,31 | 1,80 | 42,31 | 1,79 | 26,92 | 1,57 | 3,85 | 1,14 | 30,77 | 1,50 | 23,08 | 1,53 |
| N | 30,00 | 1,98 | 30,00 | 1,52 | 23,33 | 1,87 | 20,00 | 2,14 | 16,67 | 1,74 | 13,33 | 2,08 | 10,00 | 1,83 | 13,33 | 1,83 | 23,33 | 1,35 |
| AN | 47,37 | 1,54 | 57,89 | 2,20 | 63,16 | 2,39 | 68,42 | 2,41 | 52,63 | 2,18 | 47,37 | 2,31 | 36,84 | 1,14 | 47,37 | 2,22 | 26,84 | 2,04 |
| BN | 47,06 | 1,78 | 82,35 | 1,84 | 82,35 | 1,96 | 88,24 | 1,95 | 70,59 | 1,95 | 64,71 | 2,34 | 17,65 | 1,38 | 64,71 | 1,72 | 70,59 | 1,61 |
| BED | 63,64 | 1,48 | 72,73 | 1,92 | 72,73 | 1,86 | 54,55 | 2,38 | 63,64 | 1,65 | 45,45 | 1,51 | 18,18 | 1,50 | 54,55 | 1,75 | 36,36 | 1,52 |
| EA | 40,00 | 1,53 | 55,00 | 1,66 | 60,00 | 1,94 | 55,00 | 1,88 | 40,00 | 1,88 | 55,00 | 1,91 | 15,00 | 1,28 | 45,00 | 1,76 | 45,00 | 1,68 |
| NOS | | | | | | | | | | | | | | | | | | |
| G | 6,90 | 1,37 | 31,03 | 1,53 | 24,14 | 1,76 | 44,83 | 1,71 | 27,59 | 1,36 | 20,69 | 1,72 | 0,00 | 0,26 | 31,03 | 1,64 | 20,69 | 1,41 |

Evaluation and considerations

As one might expect, nicotine dependence and alcohol abuse seem to be the abuse-dependency behaviours most associated with a lower prevalence of comorbidity.

In general, eating disorders, such as bulimia nervosa and binge eating disorders, are associated with a higher prevalence of comorbidity. Incidence of a related psychopathology varies from a minimum of 38.6% of those abusing alcohol to 100% of bulimics (Table 11.11).

Analysis of the prevalent problem in each diagnostic category points to the obsessive-compulsive spectrum as the area most frequently associated with addictive behaviours, with the addition of the area of somatisation anxiety for nicotine dependence, and depression and generalised anxiety for alcohol dependence.

As far as the group of eating disorders are concerned, obsessive-compulsive problems, interpersonal sensitivity and depression show a more frequent pathological score, whereas in pathological gambling it is depression.

Examination of Table 11.12 verifies that with regard to eating disorders more than 50% of subjects have pathological scores in the obsessive-compulsive spectrum, interpersonal sensitivity, depression and anxiety. Is this prevalence typical of eating disorders, or is it heavily influenced by the gender of the subjects? In more than 50% of patients with bulimia nervosa, in particular, nearly all the pathological items have an elevated index of suffering. Observation of the average pathological score attained shows decidedly elevated values (more than 2) for anorexics in nearly all items. High elevated scores are also attained in the area of hostility in subjects with heroin dependency, nicotine dependency and bulimia nervosa. Finally, equally high values are to be found in the area of depression, as far as patients suffering from nicotine dependency and binge eating disorders are concerned.

This preliminary study allows definition of the following general considerations:

- In the pathologies of abuse and dependency, SCL-90-R is a suitable and useful tool for an initial assessment of the psycho-pathologic areas that merit further investigation. Satisfaction of DSM-IV criteria turns out to be indispensable for a definitive dual diagnosis. Given its flexibility, it is an optimal tool for follow-up appraisal.
- All abuse/dependency behaviours are characterised by the presence, even if the proportion is variable, of a psychopathological profile on the obsessive-compulsive spectrum.
- Eating disorders are burdened by a greater amount of associated psychopathology than dependencies on psychoactive substances.

It would seem important at this point to carry out a more thorough study, one that takes into consideration the differently present variables in the various

diagnostic categories, such as gender and age, and one with a much more defined period for subjects with problems arising from the use of psychotropic substances. The predominance of males in drug dependencies and females in eating disorders could determine a marked difference in psychopathologic expression. On the other hand, screening over a period when the patient is using drugs, rather than being drug-free, could point to or hide the concomitant psychopathology.

Conclusions

The historical division between departments of mental health and dependency in Italy is an obstacle preventing the provision of expert treatment by a single department.

The Department of Addictive Behaviours in Bergamo was one of first in Italy to formalise an agreement with the three departments of mental health in the Region. This agreement, which has been in force since 2000, has resulted in a significant improvement in our understanding of patients, in the quality of treatment, and in the relationship between the organisations involved. The purpose of the agreement was to facilitate and improve the therapeutic and operative management of these patients. The results of this co-operation, which is developing year on year, involving a large number of patients has been described, together with the first psychiatric assessment in our centres.

We think that, in the case of addictive disorders, SCL-90-R is a suitable and useful tool for an initial assessment of the psycho-pathologic areas that merit further investigation. Satisfaction of DSM IV criteria turns out to be indispensable for a definitive dual diagnosis. Given its flexibility, it is an optimal tool for follow-up appraisals.

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(B) Comorbidity in Padua

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Summary

In this chapter we describe the organisational status of the existing treatment structures in the Veneto Region and a local survey which reported on clinical data for the social services in Veneto and secondly an analysis of the phenomenon of psychiatric comorbidity. Finally, we outline the future prospects for the work actually being undertaken in the Region.

Nel presente lavoro sono descritti lo stato organizzativo delle strutture preposte alla cura della Regione Veneto e una indagine locale in cui sono riportati i dati clinici dei servizi sociali veneti analizzati secondo il fenomeno comorbidità psichiatrica. Inoltre sono ivi delineate le prospettive future su cui la Regione sta attualmente lavorando.

Background

In Italy treatment for addicts is organised into Addiction Departments and these are divided into Services and Units. These are structured to meet specific local needs. For example in Padua there are two Addiction Services and one Anti-infection Service that form the Department for Addiction. In turn, this is divided into several Units: prisons; tobacco addiction; prevention; epidemiology; family therapy; alcoholism; and community work-plan facilities. The Department for Addiction is financed by the Government. It also co-ordinates the local services, such as therapeutic facilities and an alcohol self-help group.

The Department is well-placed to observe the physical and psychological diseases associated with drugs, since its services cover a very large area (20 communes). The majority of patients use heroin. However, there is also use of cocaine, cannabis and alcohol. The majority of patients are in methadone therapy, or in therapy with buprenorphine or with antagonists. The remainder is cared for through psychological treatments or only need social interventions.

The Department is open every day, and is a low threshold ambulatory one without any exclusion criteria. No charge is made for the services provided, so patients are frequently homeless and strangers (i.e. from outside the local community). The majority are self-referred, but there are also patients referred by doctors and prisons. The Department offers a wide range of services: medical care, substance misuse treatment, and also more specific provisions such as meal vouchers, social assistance and psychotherapy. Full-time voluntary workers, nurses, doctors, psychologists and social workers are employed within the services.

The Department encounters a significant number of patients with dual diagnoses; the proportion of clients with a mental illness is about 1 in 5, but specific care packages or other services are not provided for this purpose.

Given the fact that the number of drug and alcohol addicts with psychiatric disorder is constantly rising and that these patients are a diagnostic and therapeutic challenge, requiring integrated treatments, and because of a high drop-out rate a careful evaluation and classification together with new strategies of management are necessary. In recent years, the Veneto Region, leader in this field in Italy, has been working on dual diagnoses. A working group has been set up that will define, in collaboration with staff from the fields of addiction and mental health, guidelines in order to improve the recognition of these problems and to improve treatment.

Retrospective survey

In the Veneto Region a retrospective survey has been carried out in order to assess the prevalence of drug and alcohol addicts with psychiatric diagnosis among the patients in the care of the Dependency Departments. The study looked at all the addicts in each Local Health Unit (LHU) that were under continuous and complex treatment on 31 December 2002. 'Continuous and complex treatment' means that the patient (drug or alcohol addict) has received a correct and complete diagnosis, and has been treated, either at home, or at the Addiction Service, or in a therapeutic community, with psychological, social and/or pharmacological assistance once a week in the last three months at least.

Clients with 'dual diagnoses' were defined for this study as an drug/alcohol addict with a psychotic or personality disorder, as specified in ICD-9 codes (WHO, 1977): 295 (schizophrenic psychosis), 296 (affective psychosis), 297 (paranoid disorder), 298 (other psychosis), 301 (personality disorder). Table 11.13 summarises data on drug addicts, while Table 11.14 gives information on alcoholics.

The total number of drug addicts under continuous and complex treatment in the Veneto Region on 31 December 2002 was 9,754, 20% of whom were dually-diagnosed. The rate varied from 6.1% in LHU 4 to 52.5% in LHU 21. On average, 12.4% of the drug addicts in treatment at 31 December 2002 were following a therapeutic/rehabilitative programme in public or private therapeutic communities, the proportion varying from 3.6% in LHU 22 to 26.3% in LHU 1. Half (48%) of the drug addicts in therapeutic communities were dually-diagnosed for a psychotic disorder or serious personality disorder, the proportion varying from 0% in LHU 2 to 100% in LHUs 9, 15 and 16.

Table 11.13: Dually-diagnosed drug addicts in treatment in each Local Health Unit in the Veneto Region on 31 December 2002

| Local Health Unit | Drug addicts in treatment | | Dually-diagnosed drug addicts | | Drug addicts in therapeutic communities | | Dually-diagnosed drug addicts in therapeutic communities | |
|-------------------|---------------------------|--|-------------------------------|------|---|------|--|-------|
| | No. | | No. | % | No. | % | No. | % |
| 1 Belluno | 38 | | 12 | 31.6 | 10 | 26.3 | 5 | 50.0 |
| 2 Feltre | 98 | | 50 | 51.0 | 7 | 7.1 | 0 | 0.0 |
| 3 Bassano del G. | 342 | | 46 | 13.5 | 14 | 4.1 | 7 | 50.0 |
| 4 Thiene | 593 | | 36 | 6.1 | 105 | 17.7 | 12 | 11.4 |
| 5 Arzignano | 506 | | 50 | 9.9 | 24 | 4.7 | 16 | 66.7 |
| 6 Vicenza | 711 | | 83 | 11.7 | 90 | 12.7 | 33 | 36.7 |
| 7 Pieve di Soligo | 681 | | 225 | 33.0 | 92 | 13.5 | 41 | 44.6 |
| 8 Asolo | 350 | | 80 | 22.9 | 37 | 10.6 | 13 | 35.1 |
| 9 Treviso | 604 | | 51 | 8.4 | 63 | 10.4 | 63 | 100.0 |
| 10 San Donà di P. | 555 | | 118 | 21.3 | 76 | 13.7 | 32 | 42.1 |
| 12* Veneziana | 644 | | 166 | 25.8 | 162 | 25.2 | 65 | 40.1 |
| 13 Mirano | 324 | | 48 | 14.8 | 14 | 4.3 | 10 | 71.4 |
| 14 Chioggia | 351 | | 48 | 13.7 | 47 | 13.4 | 10 | 21.3 |
| 15 Cittadella | 563 | | 45 | 8.0 | 37 | 6.6 | 37 | 100.0 |
| 16 Padova | 888 | | 296 | 33.3 | 90 | 10.1 | 90 | 100.0 |
| 17 Este | 317 | | 115 | 36.3 | 39 | 12.3 | 16 | 41.0 |
| 18 Rovigo | 269 | | 36 | 13.4 | 45 | 16.7 | 14 | 31.1 |
| 19 Adria | 152 | | 10 | 6.6 | 13 | 8.6 | 3 | 23.1 |
| 20 Verona | 854 | | 206 | 24.1 | 161 | 18.9 | 62 | 38.5 |
| 21 Legnago | 366 | | 192 | 52.5 | 67 | 18.3 | 49 | 73.1 |
| 22 Bussolengo | 548 | | 38 | 6.9 | 20 | 3.6 | 9 | 45.0 |
| Total | 9,754 | | 1,951 | 20.0 | 1,213 | 12.4 | 587 | 48.4 |

Source: Veneto Region - Local Health Units - Dependency Departments

Data processing: Veneto Region - Social Services Department - Drug Prevention and Care Office. *LHU 11 no longer exists.

The total number of alcoholic patients under continuous and complex treatment in the Veneto Region on 31 December 2002 was 6,333, 17.9% of whom were dually-diagnosed. The rate varied from 5.4% in LHU 5 to 37.7% in LHU 17. Only 4.7% of the alcoholics under treatment on 31 December 2002 were following a therapeutic/rehabilitative programme in public or private therapeutic communities, the proportion varying from 0% in LHU 19 to 20.3% in LHU 9. Just over half (54%) of the alcoholics in therapeutic communities were dually-diagnosed with a psychotic disorder or serious personality disorder. The proportion varied from 0% in LHUs 2, 8, 19 and 22 to 100% in LHUs 15 and 16.

Table 11.14: Dually-diagnosed alcoholics in treatment in each Local Health Unit in the Veneto Region on 31 December 2002

| Local Health Unit | Alcoholics in treatment | | Dually-diagnosed Alcoholics | | Alcoholics in therapeutic communities | | Dually-diagnosed Alcoholics in therapeutic | |
|-------------------|-------------------------|--|-----------------------------|------|---------------------------------------|------|--|-------|
| | No. | | No. | % | No. | % | No. | % |
| 1 Belluno | 112 | | 25 | 22,3 | 6 | 5,4 | 2 | 33.3 |
| 2 Feltre | 222 | | 75 | 33,8 | 3 | 1,4 | 0 | 0.0 |
| 3 Bassano del G. | 368 | | 60 | 16,3 | 4 | 1,1 | 2 | 50.0 |
| 4 Thiene | 199 | | 25 | 12,6 | 8 | 4,0 | 5 | 62.5 |
| 5 Arzignano | 534 | | 29 | 5,4 | 51 | 9,6 | 17 | 33.3 |
| 6 Vicenza | 267 | | 34 | 12,7 | 15 | 5.6 | 4 | 26.7 |
| 7 Pieve di Soligo | 325 | | 107 | 32,9 | 6 | 1.8 | 2 | 33.3 |
| 8 Asolo | 111 | | 29 | 26,1 | 19 | 17.1 | 0 | 0.0 |
| 9 Treviso | 345 | | 56 | 16,2 | 70 | 20.3 | 56 | 80.0 |
| 10 San Donà di P. | 469 | | 69 | 14,7 | 8 | 1.7 | 4 | 50.0 |
| 12* Veneziana | 91 | | 10 | 11,0 | 9 | 9.9 | 5 | 55.6 |
| 13 Mirano | 377 | | 61 | 16,2 | 3 | 0.8 | 1 | 33.3 |
| 14 Chioggia | 247 | | 47 | 19,0 | 11 | 4.5 | 8 | 72.7 |
| 15 Cittadella | 663 | | 66 | 10,0 | 18 | 2.7 | 18 | 100.0 |
| 16 Padova | 349 | | 123 | 35,2 | 8 | 2.3 | 8 | 100.0 |
| 17 Este | 239 | | 90 | 37,7 | 10 | 4.2 | 8 | 80.0 |
| 18 Rovigo | 503 | | 76 | 15,1 | 8 | 1.6 | 7 | 87.5 |
| 19 Adria | 197 | | 18 | 9,1 | 0 | 0.0 | 0 | 0.0 |
| 20 Verona | 502 | | 75 | 14,9 | 25 | 5.0 | 4 | 16.0 |
| 21 Legnago | 140 | | 50 | 35,7 | 11 | 7.9 | 10 | 90.9 |
| 22 Bussolengo | 73 | | 7 | 9,6 | 5 | 6.8 | 0 | 0.0 |
| Total | 6,333 | | 1,132 | 17.9 | 298 | 4.7 | 161 | 54.0 |

Source: Veneto Region - Local Health Units - Dependency Departments

Data processing: Veneto Region - Social Services Department - Drug Prevention and Care Office. * LHU 11 no longer exists.

Changes planned for the future

According to previous reported information the Veneto Regional Government, under legislation (Act no. 3745 of 5 December 2003), has promulgated guidelines for an operational protocol on dual diagnosis in order to achieve joint working of dependency and mental health departments.

Three kinds of treatment have been highlighted in this protocol:

(a) *Sequential*: the most acute disease is cured first; the less serious disease is treated secondarily. There are separate health teams (one for addiction and one for mental health), and, as a consequence, the care of the patient may be controversial.

(b) *Parallel*: the patient is taken care of by two medical teams (addiction services and mental health) simultaneously. The teams stay separated and apply separate treatments, so communication problems may arise due to the different treatment philosophies. In addition, such an approach to care may

be confusing to the patient.

(c) *Integrated*: there is only one health team, which is made up of health professionals trained in both addiction medicine and mental health, so that the patient is given coherent explanations and therapeutic treatments.

Integrated treatment appears clearly as the most complete, since it helps to minimise possible conflicts between the health professionals, reduce the risks of contradictory messages for the patient and remove various obstacles (even economic) to the access and continuity of care.

Every protocol has to set out the following information:

1. The path to achieve the diagnosis and co-operation between services.
2. Times and modalities of the therapeutic programmes, services' competence, case manager, therapeutic schedules for psychotropic drugs.
3. Emergency modalities and possible admission to hospital.
4. How to draft and apply residential rehabilitation programmes.
5. Patient-charging and auditing of therapeutic programmes for those cared for in therapeutic communities.
6. Easier access to local and regional services.

Responsibilities of dependency departments and mental health departments for each of the above-mentioned points also have to be set out.

In respect of therapeutic communities, the Regional Government stated that: admission must be requested and certified by the departments involved, which will file and make available all the data concerning the present and past treatments and the behavioural aspects of the patient

The psychotic disease shall be checked on admission. Times and means of treatment shall be arranged through an agreement between the therapeutic community, the dependency department and the mental health department.

Finally the Veneto Regional Government legislation provides some evaluation indicators as well:

- The precise times of points 1, 2, 3 shall be arranged in a protocol between the dependency department and mental health department within six months.
- The same protocol shall be explicit on points 1-7.
- The applying of the protocol shall be checked by an interdepartmental group.
- Joint charging shall be documented and quantified.
- An agreement on the treatment of dual diagnosis patients in therapeutic communities shall be arranged.

In the future it will be possible to give information on the results of this new type of approach for patients with dual diagnoses.

A study on comorbidity by the Addiction Department of Padua

This final section describes a project, conducted by the Department for Addiction in Padua, which studied comorbidity amongst drug addicts, through an evaluation and analysis of their life conditions and in particular, of their psychological condition.

Introduction

The results of this study come from the administration of both the EuropASI questionnaire and the semi-structured CIDI-C interview. All the patients who presented themselves to the local addiction services ('Ser. T.') in the calendar year 2002 were included in this study.

All the new users of the Ser. T. aged 18 to 65 years were included in this study. This sample consisted of both first-time users of the services and patients who had re-presented after a minimum of at least three months since the end of their previous therapeutic treatment. Informed written consent was obtained from subjects. Patients who did not meet the afore-mentioned criteria, together with those with severe cognitive disturbances and/or suffering from pathologies which could compromise the tests' reliability, were excluded.

Evaluation instruments

At a patient's first assessment the EuropASI questionnaire (McLellan *et al.*, 1980, 1985) was administered with the aim of establishing the addiction rate and the patient's psychological, medical and social problems. The interview instrument comprises: a medical section that enquires about an individual's general medical condition; work/self-maintenance section; alcohol and substance abuse section; legal section; family/social condition and psychological section.

After waiting for the patients to become stable for at least two weeks and without signs of suffering from withdrawal symptoms, the semi-structured CIDI-C interview (Pozzi *et al.*, 1995; WHO, 2001) was given to the patients. The intention was to verify the presence of Axis I comorbidity according to DSM-IV criteria (APA, 1994). All data processing and analysis was conducted using the SAS® statistical software package.

Descriptive analysis of data generated by EuropASI and CIDI-C

Among the 110 patients who were referred to the Ser. T., and corresponding to the inclusion/exclusion criteria, 91 completed the EuropASI interview, and 61 of these the CIDI-C interview as well. The male: female ratio was 3.8:1. The average (mean) age was 32 years (SD= 9 years). The majority of subjects (58.2%) had an educational career of less than eight years. Most patients (95.6%) were not married and just over half (56.7%) were in full-time employment (see Table 11.15).

Table 11.15: Demographic data from EuropASI, Padua 2002

| Variable | | Number (n= 91) | % |
|---------------------|----------------------|-------------------|------|
| Gender | Male | 72 | 79.1 |
| | Female | 19 | 20.9 |
| Age (years) | Average (mean) | 32.0 | |
| | Standard deviation | 9.0 | |
| Educational level | Primary | 53 | 58.2 |
| | Secondary | 32 | 35.2 |
| | University | 6 | 6.6 |
| Marital status | Single | 76 | 83.5 |
| | Separated/Divorced | 11 | 12.1 |
| | Married | 3 | 3.3 |
| | Widow/Widower | 1 | 1.1 |
| Occupational status | Full time (worker) | 52 | 56.7 |
| | Part-time/Occasional | 24 | 26.7 |
| | Unemployed | 10 | 11.1 |
| | Student/Other | 5 | 5.5 |

Analysis of the EuropASI showed that in terms of their *medical condition*, 50.6% of those interviewed were following a substitutive treatment while 34.5% were following a programme for ambulatory addiction (scaled-down methadone therapy and/or another agonistic therapy); 4.6% were actually, or had been, under treatment at a psychiatric hospital for psychological disturbances unrelated to substance abuse. Chronic health problems were present in variable proportions: 42.2% were positive for hepatitis antibodies and 5.6% for HIV antibodies.

The most frequently used *psychoactive substances* (see Table 11.6), were as follows: heroin (87.9%), cannabis (85.7%), cocaine (82.4%) and alcohol (78.0%). The use of these substances most likely happened in a temporal sequence during the clinical history of the patients. One-fifth (18.7%) of the patients presented with poly-substance abuse problems; their average age was 20 years. The average age of getting into problematic substance abuse is about 20 and only in the following years do patients got involved with heroin and cocaine use, on average 4-5 years after abusing alcohol and/or cannabis.

With reference to *family and social condition* what stands out is that almost half of those interviewed (45%) were satisfied with their own social condition, that most of them do not live with people with a substance abuse history (90.1% of them live with people who do not consume alcohol, 87.5% with people who do not consume psychoactive substances). With regards to social relationships, 31.5% declared they had no friends at all. One-third (33%) of them said they had had conflicts with relatives in the last month and 20% of them also suffered from relational conflicts in the extra-family environment.

Table 11.16: EuropASI results for frequency of psychoactive substance use and starting age, Padua, 2002

| Substance | Use Number (n = 91) | % | Starting age (years) | |
|---|------------------------|------|----------------------|-----------------------|
| | | | Mean | Standard deviation |
| Heroin | 80 | 87.9 | 21.1 | 5.6 |
| Cannabis | 78 | 85.7 | 16.1 | 3.0 |
| Cocaine | 75 | 82.4 | 20.9 | 5.4 |
| Alcohol (abuse) | 71 | 78.0 | 17.4 | 5.0 |
| Amphetamine | 36 | 39.6 | 20.0 | 5.0 |
| Hallucinogens | 38 | 41.8 | 19.5 | 5.0 |
| Volatile substances | 24 | 26.4 | 18.8 | 5.4 |
| Different (ecstasy, other opium bases) | 14 | 15.4 | 23.0 | 4.8 |
| Polysubstance abuse | 17 | 18.7 | 20.3 | 5.2 |

Information on the experience of violence shows that 73.0% of those interviewed suffered from psycho-emotional violence, 34.8% from physical and 13.3% suffered from sexual violence.

The results on *psychological condition* using the EuropASI questionnaire (see Table 11.17) made clear that patients, during the last month, had been suffering from anxiety disorders (34.8%) followed by a high percentage of depressive disorders (23.6%). A relatively high percentage (18.7%) of those interviewed, in the last 30 days, needed pharmacological prescriptions to cure their psychological disorders. The proportion reporting problems associated with behaviour control was quite low (11%). Hallucinations were reported by 8.8% of patients. Among the sample 16.5% stated they had had suicidal ideations and 2.2% declared they had attempted suicide through different ways during the previous month.

At the time of the interview about half of the patients (47.3% at the 'Quite' and 'Very much' level) described themselves as being seriously worried about their own psychological condition. Moreover the same patients, in almost 60% of cases, said they felt it was very important to receive whatever kind of treatment was necessary to face their own psycho-emotional difficulties. During their lifetime 22% of the patients needed to be admitted to hospital and 39.6% underwent ambulatory treatment for psychiatric disorders.

Clinical gravity profiles were calculated by the interviewers using a 9-step evaluation scale (0-1 none or slight problem; 2-3 slight problem; 4-5 moderate problem; 6-7 severe problem; 8-9 extremely severe problem) (McLellan *et al*, 1980) An analysis of these results showed that, apart from obvious problems connected to the use of psychoactive substances, 41.7% of patients showed psychological disorders from moderate to severe while 11% of them reported an extremely severe condition.

Table 11.17: EuropASI results for psychological condition, Padua, 2002

| Disorder | Number (n = 91) | % |
|-------------------------------|-----------------|------|
| Anxiety disorders | 31 | 34.1 |
| Depressive disorders | 21 | 23.1 |
| Pharmacological prescriptions | 17 | 18.7 |
| Suicidal ideation | 15 | 16.5 |
| Behaviour control | 10 | 11.0 |
| Hallucinations | 8 | 8.8 |
| Attempted suicide | 2 | 2.2 |

The CIDI-C interview was administered to explore the presence of Axis I psychiatric comorbidity. One-third (34.4%) of patients displayed anxiety disorders. More than 11% showed a psychosomatic disorder. Only 5% presented with a mood disorder while food and psychotic disorders seem to be less widespread (see Table 11.18).

Table 11.18: CIDI-C results for comorbidity using DSM-IV, Padua, 2002

| Diagnosis | Number (n = 61) | % |
|----------------------|-----------------|------|
| Anxiety disorders | 21 | 34.4 |
| Somatoform disorder | 7 | 11.5 |
| Mood disorders | 3 | 4.9 |
| Psychotic disorders | 1 | 1.6 |
| Alimentary disorders | 1 | 1.6 |

Conclusions

The perception of patients about the presence of psychological disorders and their gravity appears to force health professionals in this sector to consider or re-consider those patients as suffering from psychiatric diseases with the intention of paying more attention to this phenomenon. There is now too much focus in comorbidity on the effects caused by psychoactive substances. There is a need for a complete understanding of patients' mental health.

Examination of the data from the study outlined above, concerning drug addicts' characteristics in respect of severe mental illness demonstrates that this interest is correct. One in five patients showed symptoms of mental illnesses. Patients' anxiety about their own psychological condition is confirmed moreover by the results from the CIDI-C questionnaire. This provides evidence of high levels of comorbidity in terms of Axis I psychiatric diagnoses. In particular, it seems that a concurrence exists between the perception of mood disorders (anxiety, depression, suicidal ideations) and anxiety disorder, as observed through a large number of diagnoses performed using the CIDI-C instrument. The important association between anxiety disorder and drug addiction could constitute an additional benefit in studying this kind of patient and make us reflect about the need of a better understanding of the risks patients take, their vulnerability and the importance of a comprehensive treatment package (Maremmanni *et al.*, 1997; Pozzi *et al.*, 1999; Maremmanni and Pacini, 2002) that could reduce the risk of suicide (Pages *et al.*, 1997; Kamali *et al.*, 2000; Scharr and Ojehagen, 2001; Zilberman *et al.*, 2003).

We should not underestimate the risk associated with the potential of some substance to trigger mental disorders. We just have to consider the willpower that can be instilled into a cocaine user or about the grave depression following reduction of an individual's abuse, at a mental level, and the consequent deeply challenging exhaustion that pushes them in to a pessimistic condition, thus making a diagnosis more difficult. In particular, the already difficult diagnosis of these patients is complicated by the contextual use of substances: bipolar patients who present with drug addiction show a worse course of illness, a less favourable prognosis characterised by mixed states and rapid cycles (Brady and Lydiard, 1992; Tohen *et al.*, 1998; Cassidy *et al.*, 2001; Sherwood *et al.*, 2001; Halsband, 2003). Younger addicts appear to be at higher risk of experiencing psychiatric symptoms (Shrier *et al.*, 2003; Swadi and Bobier, 2003).

The association between addiction (such as reported in the early literature and confirmed by this study) and severe mental illness, especially anxiety and mood disorders, as reported by patients and confirmed by DSM-IV diagnosis, requires us to consider preventive interventions. Such interventions are necessary, not only in relation to substance abuse but also as secondary prevention for mental health problems. By secondary prevention we mean taking into consideration early on situations that could lead to a higher risk of illness in particular among young people who, opportunely treated, could live a full and psychologically healthy life.

Further detailed studies are necessary. It is right and proper to remember that the psychoactive substance user, nowadays even less likely to be addicted, brings with him/her the traces of vulnerability. It is unethical/unprofessional to under-estimate such vulnerability, above all when present in a young population.

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Chapter 12 The Maltese experience

G Grech and A Grech

Summary

This chapter tries to explain the work that has been done in trying to establish a comorbidity programme for substance misuse in Malta. This service was introduced a year ago and has been running smoothly since. An evaluation of the services is expected to be carried out in a few months' time. This project is being delivered from the Psychiatric Department of the Ministry of Health and the National Agency Against Drugs and Alcohol Abuse – *Sedqa*, that falls under the Ministry for the Family and Social Solidarity.

Dan l-artiklu jagħti ħarsa lejn ix-xogħol li sar sabiex jitwaqqaf servizz għal persuni li jbagħtu minn kundizzjoni mentali u għandhom ukoll problema ta' abbuż minn sustanzi. Is-servizz twaqqaf sena ilu u hu mistenni li jsir l-ewwel evalwazzjoni tiegħu fix-xhur li jejjin. Dan is-servizz jingħata mid-Dipartiment tal-Psikjatrija tal-Ministeru tas-Saħħa u l-Ajenzija Nazzjonali għall-ħarsien mill-Abbuż tad-Droga u l-Alkoħol - sedqa, li taqa' taħt il-Ministeru għall-Familja u Solidarjeta' Soċjali.

Introduction

Substance misuse and dependency frequently occur with other psychiatric conditions. This chapter will discuss the background and the development of comorbidity services on the Islands of Malta.

Comorbidity has become a major clinical problem in recent years. Concerns have been expressed by staff from various treatment centres in Malta about the large number of clients on long-term psychiatric medication admitted into treatment for substance dependence.

The development of treatment services for such clients was speeded up primarily due to the fact that this sub-group of clients was causing disturbances and disruption in all the units they were referred to in the medical services, especially when admitted to the psychiatric hospital. The service given to these clients was associated with poor prognosis and was proving to be costly due to the 'revolving door' syndrome.

The need to develop a Comorbidity Service had thus become an imminent need for the Maltese Islands. For this purpose, a working group was set up between the mental health providers in Malta and the Government agency *Sedqa* that caters for addictive programmes in Malta, to draw up plans to implement this project.

The focus of the service provision is mainly substance misuse clients who have a diagnosed or undiagnosed mental health problem. The service

matured in a manner so that it will prevent the classical 'revolving door' syndrome that these clients usually end up experiencing. Attempts are being made to streamline the service and to prevent unnecessary referrals to services, where these clients feel themselves unwanted. The two main arms of this service are run by mental health professionals and substance misuse professionals.

Two terms are usually given to this client group – (i) dual diagnosis and/or (ii) clients that fall under the term 'comorbidity'. However, there is now general consensus on using the term comorbidity, i.e. the simultaneous presence of two or more disorders.

Data on comorbidity in Malta remain incomplete and fragmented. Since no comorbidity studies have been carried out so far, no figures are available for Malta. However, a survey carried out on psychotic patients at an Inner London district revealed that 36% of patients misused drugs or alcohol (Menesez *et al.*, 1996). In the United States of America, evidence suggests that half of all patients with schizophrenia have a substance misuse problem (Haywood *et al.*, 1995). Co-morbid clients may have a substance misuse problem together with a psychiatric condition which is either: (a) substantially unrelated; (b) related by one being either symptomatic of, or as a consequence of, the other; (c) related by both appearing to stem from the same risk factors (Barker, 1998); and (d) related by the treatment being given to both conditions, requiring that both disorders be considered together (Crome, 1999).

Services in Malta

Comorbidity services, i.e. covering mental health problems with substance misuse problems, have been offered in a structured and organised fashion since 2003. These services cover the whole of the Islands of Malta and Gozo and were developed jointly by the mental health providers in Malta and the Government Agency *Sedqa* that caters for addictive programmes on the Islands. The population of the Maltese Islands is around 400,000.

The main centre for provision of services is the Substance Misuse Unit at St.Luke's Hospital, in Guardamangia, which is the main hospital for Malta. The *Sedqa* agency, together with three consultant psychiatrists working with the Government Mental Health Services, provides the services. Non-governmental organisations also participate in this service by referring clients.

Services include mental health assessments together with substance misuse stabilisation and harm reduction. Most of the clients collect their medication from the Substance Misuse Unit, where supervision is provided. Clients also receive their prescribed psychotropic medication where indicated by the nurses at the Unit. Social workers attached to the Unit provide all support services needed and provision is also made for psychological/ family therapy, when indicated. These latter services are provided by *Sedqa*.

In the case of clients who are acutely psychotic, these are admitted to the recently opened Dual Diagnosis Unit at Mount Carmel Hospital (the main Psychiatric Hospital in Malta; but if they need time out of services or stabilisation of medication, they can be admitted to the Substance Misuse Inpatient Unit run by *Sedqa*.

All the services provided are Government-funded, but voluntary agencies can refer their clients through the Medical Officer at the Substance Misuse Unit who will then refer them to the comorbidity services.

The role of *Sedqa*

Sedqa was set up in 1994 following an evaluation of the drugs and alcohol services on the Islands of Malta. The study was carried out by a Government-appointed committee chaired by Magistrate Dr. Silvio Meli. At the end of the study, the committee produced the "Meli Report" comprising recommendations to Government on the restructuring of the services in Malta (Meli, 1993).

Sedqa is funded by the Maltese Government and falls under the Foundation for Social Welfare Services under the responsibility of the Ministry for the Family and Social Solidarity. It is the Government's executive arm for the drugs and alcohol services in Malta. *Sedqa*'s field of action encompasses prevention, treatment and rehabilitation as well as research linked with addiction services in Malta and overseas. A website has been set up at <http://www.sedqa.org.mt>.

Before *Sedqa* was set up, the services were solely catered for by the Psychiatric Services at the main mental institution in Malta, i.e. Mount Carmel Hospital. Workers in the field have attempted to adapt their existing resources to address the needs of co-morbid clients. As services have been developed, these respective entities are now co-ordinating their services and this is producing much better treatment results in the fields of addiction. All services are offered free of charge to clients, who are also given free medication.

Client population(s)

A prevalence study on licit and illicit use of drugs in Malta was carried out by the National Commission on the Abuse of Drugs, Alcohol and Other Dependencies in 2001 among the general population aged between 18 and 65 years. In its final analysis, the report concludes that "in comparison to other European Countries, Malta has a limited number of active drug users and that there is no wide diffusion of even the less harmful drugs like cannabis" (Korf *et al.*, 2003).

Cannabis is used about twice as much as other illicit substances in Malta compared to about 5 times in most other European countries. ESPAD surveys

show the use of both cannabis and other drugs by 15-16 year olds increased between 1995 and 2003; inhalant use remains very high - slightly higher than that of cannabis (NFP & NCADAOD, 2004:19-21).

There are estimated to be 1,450 problem (i.e. heroin) drug users. About 1,000 of the 1,200 persons with heroin problems are problem users and in treatment. About 80% of heroin users inject (NFP & NCADAOD, 2004:31). Those with heroin problems make up 86% of treatment demand, with cannabis (9%) and cocaine (4%) accounting for most of the remainder.

Other research studies are on-going by the Government Agency *Sedqa*. The National Commission on the Abuse of Drugs, Alcohol and Other Dependencies is drawing up a draft strategy on prevention to be presented to the Ministry for the Family and Social Solidarity in the coming months (Massa, 2005).

The Substance Misuse Service is run on an outpatient basis and each client is referred to the Service through an appointment system. One nurse is responsible for co-ordinating the Service between the doctors attending the Substance Misuse Unit, together with three consultant psychiatrists.

The majority of clients (up to 90%) are heroin dependants, with a good percentage of them having also other polydrug abuse problems. Clients with alcohol related problems are also seen at the clinic.

The current staffing levels at the Unit are as follows: 3 Consultant psychiatrists (part-time); 5 Medical Officers employed by *Sedqa*; and 1 full-time nurse.

A clinic is held on average every week from 8.00 am until 12.00am. All clients attending the clinic have to have a medical referral and given an appointment. On average, around 15 clients are seen during each clinic session, two of which are usually new cases, while the rest would be follow-ups.

Data related to the number of clients on medication cannot however be reliably reported, as until 2003 information regarding psychiatric medication was not consistently assessed and coded into databases upon admission. The data that do exist regarding comorbidity are derived from detoxification unit records, where psychiatrists assess clients who show behaviour and characteristics symptomatic of having a co-existing disorder. These clients are referred to the comorbidity clinic within the unit. According to such detoxification records for 2003, a total of 78 new and 188 known clients were diagnosed with some form of psychiatric comorbidity. In 2003 the total number of clients at the Substance Misuse Outpatient Unit was 733. In 2004, a 6-bed inpatient comorbidity unit was set up within Mount Carmel psychiatric hospital (NFP & NCADAOD, 2004:43).

Around 1,000 clients are presently accessing *Sedqa's* services, of which around 120 have been referred to the Comorbidity Service. However, this figure does not reflect the actual number of persons with dual diagnoses,

since only the complicated cases are presently being referred to the Service. (All clients seen in this Service are dual diagnosis patients.)

Clients are referred to the services through a doctor's referral ticket. Services run by the Substance Misuse Unit are low threshold and the waiting time for a new patient to be seen by the doctor is approximately one week. Non-urgent referrals to the Comorbidity Service have a waiting time of approximately six weeks.

Clients with dual diagnoses who are on methadone treatment are given their daily methadone dose by the Substance Misuse Unit. No provision for take-home methadone is available for this client group.

Assessment

In their report for 2004, the National Focal Point for Drugs and Drug Addiction and the National Commission on the Abuse of Drugs, Alcohol and Other Dependencies Address the issue of the lack of information regarding comorbidity in Malta (NFP & NCADAOD, 2004:46-7). They suggest the setting up of an expert group which can discuss issues such as defining the broad clinical definitions of psychiatric comorbidity, its diagnoses and treatment.

Of fundamental importance in doing this is the identification of data sources from which up-to-date information can be collected in a more consistent and reliable manner. Such data would provide a clearer picture of the clinical situation, facilitate the early identification of problems or developments that might need to be addressed, and thus give direction to more relevant and improved cost-effective implementation of interventions and responses.

The classification of mental diagnosis should soon start according to ICD-10 criteria. However, it is already apparent that two main groups of clients predominate over others: (a) those with personality disorders, and (b) those with depressive illnesses. With regard to the second category, statistics are being collected to determine whether the depression symptoms preceded the substance misuse problem or vice-versa. No results are available yet as the data are still being compiled. Up to 76% of clients have been able to keep both new and repeated appointments. The Unit also caters for repeat prescriptions and close monitoring of such clients.

Social work back-up is provided at the Unit, including liaison with the Housing Services, Child Protection Services and Hospital Social Workers. Treatment plans are tailor-made according to client's needs. Clinics provided are usually combined clinics that include the consultant psychiatrist, the substance misuse medical doctor, social worker and, most of the time, the key worker working with the client.

Training and evaluation

Although no specific training on dual diagnosis clients was given to staff, most of the staff working in the Unit has had work experience in mental health services. As regards formal training, all staff at the Substance Misuse Unit and other *Sedqa* services has had seminars organized at quarterly intervals. Training sessions are commissioned by *Sedqa* and are usually given together with the Mental Health services at Mount Carmel Hospital.

Every week doctors from the Substance Misuse Unit and key workers participate in ward-rounds conducted by the three consultants attached to the service, where clients admitted to the Substance Misuse Unit and the Mental Hospital are assessed and their treatment plan discussed and implemented. Results so far show that the system is functioning well, and better work practices are being attained with regard to service provision.

As regards to prevention strategies and identification of 'at risk' individuals, who might have co-morbid problems in addiction, *Sedqa's* services have produced awareness campaigns, both relevant to the general population and also targeting special 'at risk' groups. For two years, *Sedqa's* Secondary Prevention Services have focused their work on adolescents at risk, and together with the psychiatric services offered at the Dual Diagnosis Clinics; early interventions are being made through these services.

If the measures outlined by the 2004 report (see previous section) were to be implemented, one of the necessary considerations would have to be the limited human resources in treatment services compared to the number of clients they see. The use of a common assessment measure across all types of treatment would involve a consideration of the financial and human resources needed to effectively undertake such a course of action. In order to do this, existing staff would have to be trained or new staff recruited who are qualified to administer such an assessment instrument. Furthermore, treatment centres would have to adapt or extend their current services in order to appropriately address the needs of their co-morbid clients (NFP & NCADAOD, 2004:47).

Conclusions

It is still early to assess scientifically the validity of this type of service with participants in this project, including those clients who have had positive comments about the service.

However, we see that there are two urgent priorities that must be undertaken by service providers, if these services are to be sustained and developed. First, is the investment in trained staff, keeping in mind that staff working with this difficult sub-group have a higher turnover due to burn-out. Secondly, adequately funded research in the field, to be able to develop and assess services that are effective interventions, wise and cost-effective.

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Chapter 13 Comorbidity – is it a visible issue in Poland?

G Świątkiewicz

Summary

This chapter focuses on the issue of comorbidity from the perspective of Polish alcohol and drug treatment needs and attempts to explain the main obstacles in the process of improving knowledge and developing appropriate multidisciplinary and multispeciality treatment approaches.

In Poland traditional approaches to psychiatric disorders prevail. That means that alcohol, drug abuse and mental health treatment are handled by very narrowly specialised services and professionals. For years, professionals working in different kinds of treatment constituted isolated milieux with no opportunities for dialogue on how to deal with comorbid clients.

During the 1990s dynamic changes were observed in patterns of polydrug consumption of psychoactive substances. More and more often specialised services were faced with unspecific cases (example: drug services with alcohol dependent clients and vice versa). But comorbidity as an issue has been put on the public agenda as late as at the beginning of the new millennium. From that time demands for assessment of its prevalence and postulation of solutions have been formulated. Now one could expect that the higher visibility of the comorbidity issue among Polish professionals will be followed by increasing number of studies on its prevalence and other aspects. First attempts at this are here described.

Wartykule zawarta jest próba analizy przyczyn, które wpłynęły na relatywnie późno rozpoczętą w Polsce debatę na temat problemu podwójnej diagnozy.

Wąskie specjalizacje na lecznictwo alkoholowe, uzależnień lekowych i zaburzeń psychiatrycznych spowodowały, że pracujący w poszczególnych specjalnościach profesjonaliści tworzą zamknięte środowiska. Istniejące struktury organizacyjne nie sprzyjają przepływowi informacji i dyskusji na temat sposobów radzenia sobie z pacjentami u których stwierdza się współistnienie dwóch jednostek chorobowych.

W latach 1990-tych minionego stulecia obserwowano dynamiczne zmiany we wzorach używania substancji psychoaktywnych. Mnożyły się przypadki nadużywania równolegle alkoholu i narkotyków, coraz więcej uzależnionych próbowało też szukać pomocy w poradniach psychiatrycznych. Analizując literaturę tematu i czasopisma adresowane do lekarzy i terapeutów trzech omawianych tu typów lecznictwa, można stwierdzić, że problem podwójnej diagnozy w debacie profesjonalnej pojawił się w Polsce dopiero na początku nowego milenium. Z każdym rokiem rośnie liczba artykułów, w których autorzy dzielą się swoimi doświadczeniami, przytaczają dane na temat częstości zjawiska i jego przejawów pochodzące z literatury zagranicznej. W artykułach zwykle formułowane są postulaty pilnej diagnozy zasięgu i

przejawów zjawiska współwystępowania chorób oraz opracowania procedur efektywnego postępowania terapeutycznego. Należy przypuszczać, że rosnąca w polskiej debacie profesjonalnej widoczność zjawiska podwójnej diagnozy wkrótce zaowocuje zwiększeniem liczby badań na ten temat. Pierwsze próby są w artykule przytoczone.

Introduction

There is a common belief that the concept of co-morbidity is rather young and has been developed only in the last two decades. As early as 1804 Trotter described psychiatric symptoms that co-existed with dependence on psychoactive substances (Trotter, 1804). For years this concept has not been taken into account by professionals dealing both with mental illnesses or substance abuse and substance dependency.

From the literature review by Crawford *et al.* (2003) we learn that in the last two decades the concept of comorbidity has been revitalised and has been studied more often especially in the USA and the United Kingdom. Usually the term comorbidity is treated as equivalent to the term dual diagnosis defined as “the coexistence of a drug related disorder with a mental disorder”. This narrow definition limits studies and professional discussion on many other forms and aspects of co-morbidity. Our knowledge on treatment strategies for people with co-morbid disorders is relatively small. Such strategies are more and more urgently needed because narrowly specialised alcohol and drug services are usually expensive and ineffective. This chapter focuses on the issue of comorbidity from the perspective of Polish alcohol and drug treatments needs. Unfortunately, concrete data on the phenomena of prevalence and types of incidence are difficult to ascertain. The chapter attempts to explain the main obstacles in the process of improving knowledge and developing appropriate multidisciplinary and multispeciality treatment approaches.

Traditional approaches to psychiatric disorders in Poland

In Poland alcohol abuse and illicit drug abuse are treated as two different social problems. The issue of rising numbers of people with mental health disorders has never reached the status of a social problem. For years science in Poland and in many other countries has provided arguments supporting a narrow specialisation approach to treatment. In the 1980s, alcohol- and drug-related problems affected different populations. Drug abuse was limited to sub-cultural groups of young people. Alcoholism was associated with adults who were from across the entire social spectrum. Mental disorders were almost never associated with these problems in public debate.

As a consequence, different kinds of treatment are handled by very narrowly specialised services. Alcohol treatment is mainly offered based on the 12-step Alcoholic Anonymous model, but in many instances incorporating many elements of the Minnesota model (Świątkiewicz and Zieliński, 1998). In drug

treatment the therapeutic community approach gained high popularity. Drug treatment services offered are addressed almost exclusively to those using illicit psychoactive substances (Świątkiewicz *at al.*, 1998).

Professionals working in different kinds of treatment constitute isolated milieux. Each is very well integrated and collaborates closely: each is well trained in improving skills. The issue of comorbidity or dual diagnosis was not present among training possibilities offered by the State Agency for the Prevention of Alcohol Related Problems and the National Bureau for Drug Prevention from the beginning of the 1990s until 2003. Also mental health care professionals, mainly psychiatrists, had not been interested in the comorbidity issue. Articles focussing on comorbidity had not been published in specialist journals because they simply were not submitted. The main interest of this group (as evidenced by journals and activities of the Polish Psychiatric Association) was improvement of diagnostic techniques for individual psychiatric disorders.

Atomisation and narrow specialisation of professionals is an important obstacle in the process of rising awareness of the comorbidity issue. Nevertheless, in the last four years some progress has been made.

Developments since the 1990s

During the 1990s dynamic changes in patterns of psychoactive substances consumption were observed. There is quite good evidence that drugs consumption is no longer limited to sub-cultural or marginal behaviour. Nowadays we are faced with new fashions which are characterised by normalisation of drug use amongst a range of groups in society, but no longer only the young. Polish epidemiological studies conducted in recent years found that experimenting, occasional and recreational use of cannabis, amphetamine and non-prescribed sedatives and sleeping pills are quite prevalent among students of secondary schools and young adults aged up to 25 (Sierosławski, 2003). As a result of these changes polydrug addicts are present in both alcohol and drug treatment populations. On the basis of qualitative studies (focus groups) we learn that in many cases of addiction it is difficult to define what is the drug of first choice. Sometimes alcohol is taken to increase the intoxication effect of an illicit drug, sometimes drugs are taken to increase the effect of alcohol. Current methods and organisational regulations in treatment systems became incapable of handling these new types of client needs.

Putting comorbidity on the public agenda

To define a putative condition as an issue or problem some people or institutions should start to discuss it publicly. According to social theory developed by Spector and Kitsuse (1977) the process of 'claims-making' starts when a group of people or an institution initiate public discussion. This

theory could also be applicable when we are analysing public debate in specific communities like mental, alcohol and drug treatment milieux.

In some countries the old concept of comorbidity had been revitalised in the 1980s and 1990s. In countries where attempts to define comorbidity as an issue that needed to be better identified and solved were successful more systematic studies have been done and more data are available.

Looking at Polish journals and books aimed at professionals one finds that in the 1990s the issue of comorbidity was not discussed. As a consequence, there were no demands for assessment of its prevalence, identification of causes and postulations of solutions. This is why knowledge on comorbidity in Poland is very limited.

From the beginning of the new millennium, the terms comorbidity and dual diagnosis have been more and more evident in Polish scientific literature. Some articles have been published in specialist journals: these are outlined below.

Issued every two months *Terapia* [Therapy], which is a forum for exchanging experiences among alcohol treatment therapists, has raised some aspects of comorbidity such as co-existence of alcohol dependence with Borderline Personality Disorder, drug dependence and dependency on psychoactive pharmaceuticals, as well as neurosis and schizophrenia. In articles authors describe their own experiences. They also formulate needs for developing adequate therapeutic procedures and closer collaboration of specialists from the alcohol, drug and mental health treatment sectors (Ciulkin-Kosiorek, 2000; Smerko-Oniszczenko, 2001; Rachowska 2002; Smerko-Oniszczenko and Wieczorkowska, 2002).

Serwis Informacyjny Narkomania [Service Information - Drug Addiction] which is a journal for drug treatment therapists announced in the second half of 2003 that Polish researchers had started collaboration with the Integrated Services Aimed at Dual Diagnosis and Optimal Recovery from Addiction (ISADORA) project. To make cross-cultural comparisons possible a very precise definition of dual diagnosis was formulated. For this project, dual diagnosis is defined in ICD-10 terms as the co-existence of one from F10-F16, F18, F19 with one from F20, F23, F30. The project is still on-going and first results will be not available until the end of 2005 (Sierosławska, 2003).

Farmakoterapia w Psychiatrii i Neurologii [Pharmacology in Psychiatry and Neurology], a journal addressed to psychiatrists and neurologists, had an article on clinical consequences of dually diagnosed patients (Baran-Furga and Steinbarth-Chmielewska, 2004). The article reviews mainly English language literature on the co-existence of drug dependency with psychiatric disorders, and formulates needs for rising awareness and knowledge among Polish professionals. *Epidemiologia Zaburzeń Psychiczych* [Epidemiology of Mental Disorders] is a monthly periodical issued by the Polish Psychiatric Association offers reviews of literature on dual diagnosis in psychiatry (Adamowski *et al.*, 2003).

All the above mentioned journals are easily available to specialists to whom they are addressed and could be seen as creating opinions and treatment standards.

Any article published so far offered data taken from Polish systematic studies. Authors offer rather anecdotal based on their own observations that cases with dual diagnosis are more and more prevalent but they do not present any concrete figures on prevalence. Usually the hypothesis is formulated that comorbidity among Polish drug, alcohol and psychiatric treatment populations is at least as much widespread as in countries where systematic data are available.

Apart from exchanging experiences through specialist journals some attempts have been made to integrate drug and alcohol treatment therapists. The Department for Drug and Alcohol Studies at the Institute of Psychiatry and Neurology in Warsaw organised a national conference in 2002 which were gathered most of the prominent representatives from both the alcohol and drug fields (Protocol, 2002). People who had some experience in working with clients dependent both on alcohol and drugs shared their thoughts and observations. They agreed that both kinds of dependency should be diagnosed on the basis of very similar syndromes of mental and somatic disturbances with intermittent periods of deterioration and remission. They also argued that the abstinence concept which plays an important role in providing evidence of effectiveness in both treatments should be redefined. Traditionally, drug treatment services monitor abstinence from drugs and alcohol treatment services abstinence from alcohol. Clients who during the monitoring period abuse a substance which is not of interest to the specialist treatment service are usually noted among positive outcomes. In both systems none of the indicators measure abuse of psychoactive substances.

In general, conference participants represented those with good experience, having years of practice as therapists. Almost nobody from alcohol treatment services has ever seen or visited a drug rehabilitation centre. Similarly almost nobody from the drug field has seen an alcohol ward or clinic. During the conference many delegates confirmed that patients with parallel drug, alcohol and psychoactive substance dependency more and more often enter both kind of treatment. It was stated that closer collaboration and regular exchange of experiences is strongly needed. It was decided that the next conference would be aimed at gathering together alcohol and drug treatment professionals. The National Bureau for Drug Prevention and the State Agency for Prevention of Alcohol Problems held the conference in October 2004. During the conference professionals from alcohol and drug sectors presented and discussed treatment strategies for clients with co-existing alcohol and drug dependency. It seems that there is still a long way to go to achieve a comprehensive treatment approach for such clients (Jabłoński, 2004).

Also in October 2004, a conference on "Diagnostic and therapeutic problems of patients with dual diagnosis" was held at the Institute of Psychiatry and Neurology in Warsaw. This event was aimed mainly at psychiatrists from the

field of mental health care. A number of lectures providing knowledge on diagnostic, therapeutic and other problems associated with dual diagnoses among mental health services population were offered to participants (Conference Programme, 2004).

All in all we can state that in Poland public debate on co-morbidity has been initiated. The issue has been recognised and needs for better solutions have been formulated. It seems that in a few years time some Polish data will be delivered at least from the ISADORA project. If the tendency for a growing number of publications on the issue is maintained we can expect more concrete actions like data collection and studies of the occurrence of comorbidity.

Having only anecdotal information on the issue of prevalence it is difficult to answer the question whether we really urgently need to develop strategies for dealing with comorbidity or whether it is a real problem for Polish treatment services. According to classic constructivist analyses, studying social problems sociologists should only take into account the 'claims making' process. Such an approach provokes much controversy especially when we are dealing with applied studies. Developed by Best (1989) contextual constructivism is an approach which encourages us to confront arguments used in public debate with the occurrence of the issue in 'real life'. The problem is that usually "reality" is not measured before the discussed phenomena reach the status of an important issue.

Information needs in Poland

It is the author's opinion that some available epidemiological data derived from medical statistics would be a good starting point for developing some hypotheses. From the beginning of the 1990s rising trends in psychiatric statistics can be observed. This is true for all three categories of treatment mentioned in this paper. In Poland the main source of statistical information on prevalence and trends in mental health disorders are the data collected in annual reports from mental health institutions and sent to the Institute of Psychiatry and Neurology. From the mid-1950s this information has been collected, processed and published as statistical yearbooks (Słupczyńska *et al.*, 1994). From the beginning of the 1990s, the data collection procedure has made it possible to count persons treated, instead of episodes. The yearbooks also include information on patients treated in specialist facilities for alcohol and drug addicts. In the statistical tables only one 'main/first' diagnosis is included. There is no information on co-morbid disorders.

As was stated earlier, treatment services in Poland are narrowly specialised. There are different therapeutic approaches, specialist units, and facilities for drug and alcohol dependants and also different ones for psychiatric disorders. Outpatient as well as inpatient clinics offer services for specific clients groups. Nevertheless, every kind of treatment shows some proportion of diagnoses that are unspecific for usually very homogenous client groups.

In this context the term 'unspecific client' means for example somebody who decided to seek for help at alcohol unit is classified as a drug addict or a neurotic case and vice versa. Before making a decision as to what kind of treatment to enter clients make their own diagnosis. It is very unlikely that somebody without a serious alcohol-related problem would ask for help at an alcohol unit. The hypothesis that unspecific clients in specialist services are usually co-morbid cases seems to be reasonable. To check how widespread were unspecific cases in three kinds of treatment, the author analysed data from the statistical yearbooks described above. Table 13.1 compares absolute numbers of unspecific cases in 1998 with 2002 to answer the question whether there is a rising trend in cases in Poland. Data in the table are drawn from statistics for outpatient units. Inpatient treatment figures were not taken into account because psychiatric hospitals very often have departments for detoxification as well as for treating alcohol- and drug-related psychosis. On the basis of summary statistics it is impossible to assess the proportion of 'unspecific cases' treated by in inpatient services.

In 1997 the ICD-10 classification was implemented in Poland. It is probable that in the first year of experimenting with new diagnostic criteria some misunderstandings and errors would influence medical statistics. This is why the year 1998 was chosen as the basis for comparison.

Table 13.1: 'Unspecific' populations in alcohol, drug and mental health facilities in Poland, 1998 and 2002

| Type of care provided | All out-patients | | New out-patients | |
|-----------------------|------------------|--------|------------------|--------|
| | 1998 | 2002 | 1998 | 2002 |
| Alcohol | 3,298 | 21,819 | 1,615 | 13,187 |
| Drugs | 2,781 | 9,624 | 610 | 5,283 |
| Mental health | 15,529 | 38,331 | 5,337 | 13,291 |

Sources: IPN (1999, 2003)

In 2002 psychiatric outpatient units treated 1,074,337 episodes (2,811.6 per 100,000 population), alcohol units 155,336 (553.9 per 100,000 population) and drug units 22,770 (23.1 per 100,000 population). Among psychiatric patients almost 30% constituted newcomers, alcohol clinics noted 47% of newcomers and drug service 66%. Every kind of treatment service noted some unspecific cases. Table 13.1 compares absolute numbers of these cases in 1998 and 2002. Depending on the units' specialisation, diagnosis treated as unspecific are defined in different ways. For psychiatric units unspecific means a client whose main diagnosis is alcohol-related (F10) or drug-related, for alcohol units it means patient with drug-related and other psychiatric diagnoses, and for drug treatment units the main code suggests alcohol-related or other psychiatric problems.

In every kind of treatment sector clear increases in the number of unspecific diagnoses have been noted. This is especially true for alcohol treatment. In the 5-year period examined here, the number of patients seeking treatment for alcohol problems and finally diagnosed as drug dependent or mentally ill

rose almost 7 times among all patients and more than 7 times among new outpatients. In all three types of treatment sectors among the population who entered services for the first time, the number of unspecific cases rose more spectacularly. New clients are usually younger than the average age of the treated population and their pattern of substance consumption is increasingly closer to current patterns in the general population, e.g. a polydrug life style. Very narrowly specialised services have to deal with quite high numbers of clients for whom they have no appropriate therapeutic treatments offer. The process of exchanging patients among these three treatment services seems to be rather fast. In five years the number of 'unspecific' clients has risen seven-fold in alcohol treatment programmes, and more than three-fold in both drug and mental health treatment programmes.

Conclusions

According to Spector and Kitsuse (1977) to define a putative condition as an issue or problem some people or institution should start to discuss it publicly. During the 1990s demands for assessment of comorbidity prevalence, identification of causes and postulations of solutions had not been verbalised in Poland. This statement is based on the content analysis of selected Polish professional journals.

The traditional Polish narrow specialisation approach to treatment meant that different kinds of treatment were handled by specialist alcohol, drug and mental health services and professionals working in different sectors constituted very isolated groups.

Atomisation and narrow specialisation of professionals is an important obstacle in the process of rising awareness of the comorbidity issue. Nevertheless in the last four years some progress has been made. From the beginning of the new millennium the terms comorbidity and dual diagnosis have been seen more and more evident in Polish scientific literature. Additionally some attempts have been made to integrate drug and alcohol therapists and to put the dual diagnosis issue on the agenda of public debate in psychiatry.

So far data taken from Polish systematic studies are not available, but public debate on comorbidity has been initiated. That means that comorbidity has reached the status of an important issue and needs for solutions have been formulated. If the tendency for growing interest by professionals in the issue is maintained we can expect more concrete actions like data collection and research studies on the occurrence of comorbidity in Poland.

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Chapter 14 Psychiatric comorbidity in C.A.T. Conde - Porto

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M O Santos, M Carvalho, M Salgado, P Carvalho and
S Padrão*

Summary

The authors present - in terms of psychiatric comorbidity - a sample of the population helped in C.A.T. Conde. C.A.T. Conde is a public service integrated within the Ministry of Health that supports pregnant drug abusers. This service works with a bio-psycho-social approach in order to contribute to the diminution of perinatal and infant morbidity and mortality

Os autores apresentam uma caracterização da comorbilidade psiquiátrica de uma amostra da população acompanhada no C.A.T. do Conde. O C.A.T. Conde é um serviço público integrado no Ministério da Saúde vocacionado para o apoio a mulheres grávidas toxicodependentes que intervêm segundo um modelo biopsicosocial, com o objectivo de contribuir para a diminuição da morbilidade e mortalidade peri-natal e infantil.

Introduction

The Centro de Atendimento a Toxicodependentes [Drug users Treatment Centre] C.A.T. Conde is a day treatment unit for female drug users and provides them with pre- and post-natal care (Flores and Calheiros, 2002). The clinical reality of pregnant drug users merits a differentiated approach and so we decided to develop work in this area.

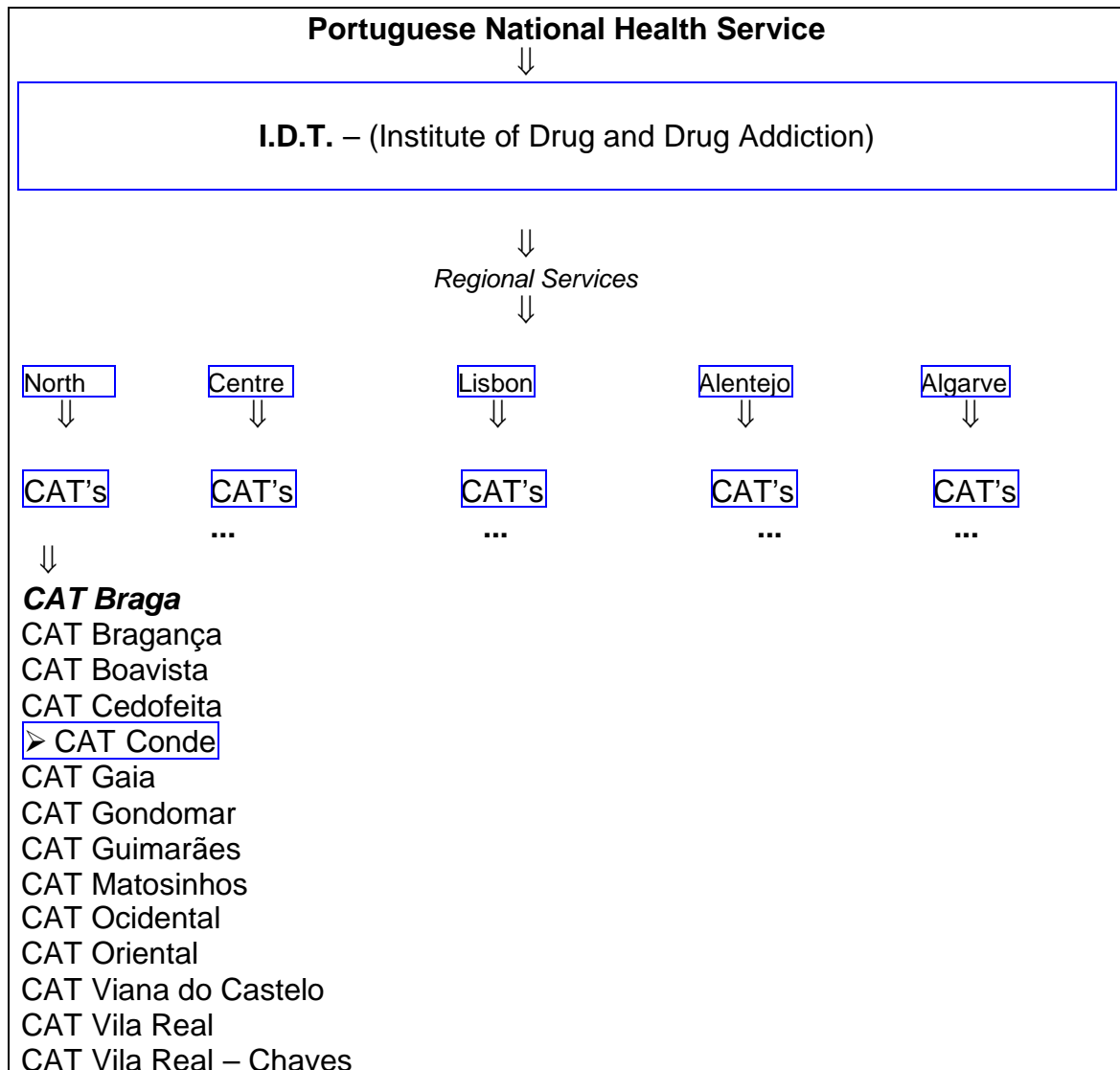
The service was created in 1990 as an integrated unit of the Centro de Estudos e Profilaxia das Drogas [Centre of Drug Studies and Prophylactics - or C.E.P.D.] until 1995 when it was named C.A.T. Conde and became an autonomous unit. The C.E.P.D. was founded in 1976 and was the first institution in Portugal that prescribed methadone hydrochloride to opiate abusers.

Integration of services

C.A.T. Conde is a unit in northern Portugal integrated within the Instituto da Droga e da Toxicodependência [Institute of Drug and Drug Addiction] or I.D.T., a service of the Portuguese National Health Service. C.A.T. Conde is located in Porto, the second most important city of Portugal, and responds to the needs of pregnant drug users resident in the north of Portugal. Figure 14.1 shows schematically how C.A.T. Conde is integrated within the structure of the I.D.T.

Patients contact the Centre either on their own initiative or through other institutions, mostly general hospitals, obstetric departments, other drug treatment centres, and street harm-reduction units.

Figure 14 .1: Relationship of C.A.T. Conde and the I.D.T.



C.A.T. Conde is the only Portuguese unit that exclusively supports pregnant drug users and all their work is developed in partnership with other community services. In order to assure partnership, C.A.T. Conde have not only formalised protocols, but also consolidated informal connections with hospitals, social security departments, social services agencies, child-minders, day nurseries, kindergartens and schools, as well as the courts.

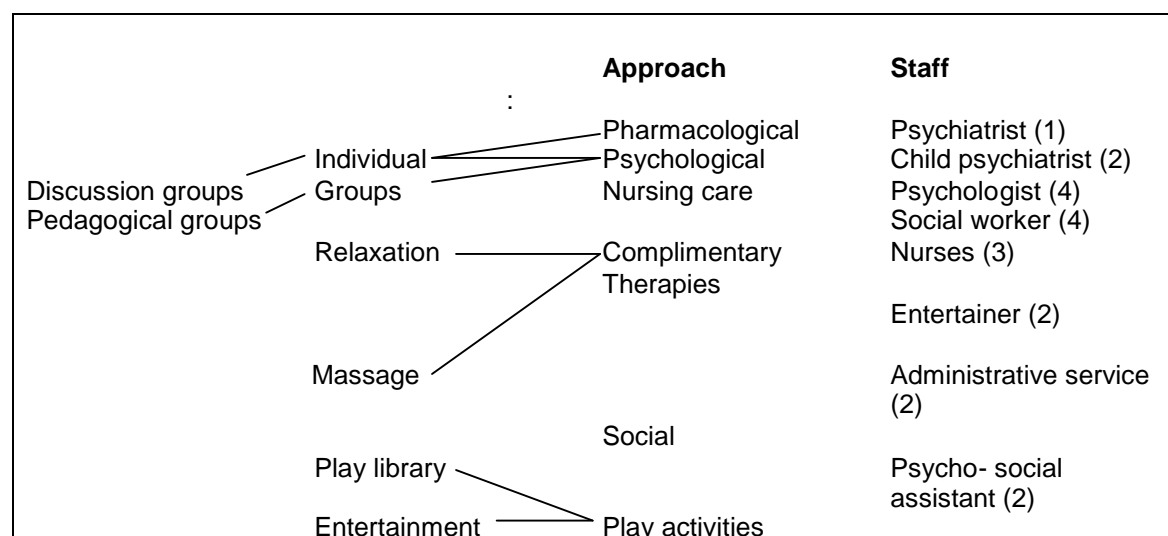
C.A.T. Conde not only provides individual clinical support to meet the needs of the women they serve but also gives clinical assistance to other institutions that work with this client population. This co-operation is exercised through protocols, which includes training of other professionals by the Unit's staff

through a close community network. Obstetric and paediatric follow-up is undertaken by the Hospital's obstetricians and paediatricians, in a formalised relationship.

Initial assessment of clients at admission to C.A.T. Conde includes the taking of a substance abuse history, urine screening, and blood tests, in addition to pregnancy tests.

Individual support to each patient is provided through a multidisciplinary approach. The team consists of a psychiatrist, a social worker, a psychologist and the nursing staff. Figure 14.2 presents schematically C.A.T. Conde's general approach and staffing complement.

Figure 14.2: C.A.T. Conde approaches and staff



As we can see from the diagram, psychosocial support is provided on an individual basis or in a group setting (therapeutic and counselling groups). Pre-natal counselling is provided by the staff of C.A.T. Conde, and by the obstetric staff in their services. Complementary therapies, relaxation techniques and massages are also therapeutic options within the service.

In order to encourage the participation of mothers in the service, C.A.T. Conde provides a special room for the children with a play-library where the children can play. The room allows the observation of their behaviours, their development, physical condition, as well as interaction between themselves and their mothers.

Since 1992, C.A.T. Conde has produced a newspaper called *O Rebento* [The Offspring], where patients can present their problems and their ideas. Finally, C.A.T. provides pre- and post-graduate training to several professional bodies, including the fields of psychiatry, child psychiatry, psychology, social work and nursing.

Characteristics of the C.A.T. Conde client population

Between 1990 and 2001 C.A.T. Conde helped 551 women. In 2001 there were 231 women in treatment, the majority in a methadone maintenance programme. Of these, 151 (65%) women presented with psychiatric comorbidity, according to ICD-10 criteria (WHO, 1992). These fall into eight major groups (see Table 14.1).

Table 14.1: Classification of CAT Conde clients presenting with psychiatric comorbidity

| Comorbid psychiatric presentation | Percentage |
|---|------------|
| Disorders of adult personality and behaviour (F60 - F69) | 28.5 |
| Neurotic, stress-related and somatoform disorders (F40 - F48) | 22.5 |
| Behavioural and emotional disorders with onset usually in childhood and adolescence (F90 - F98) | 11.2 |
| Schizophrenia, schizotypal and delusional disorders (F20 - F29) | 10.0 |
| Mental retardation (F70 - F79) | 10.0 |
| Mood (affective) disorders (F30 - F39) | 9.2 |
| Mental and behavioural disorders due to alcohol use (F10) | 8.0 |
| Mental and behavioural disorders associated with puerperium (F53) | 0.6 |

These results correspond to a transversal evaluation that provides comorbidity indicators referring to the population in treatment in the year 2001. An attempt was made to collect national data on this topic in order to compare results, but it was not possible because no similar studies could be identified.

C.A.T. Conde provides psychiatric support for all of the situations given in Table 14.1, not only as an agency in its own right but also in association with other mental health services especially when comprehensive inpatient treatment is necessary. In terms of time spent in treatment and attendance at CAT Conde, the majority of women (57%) in this diagnosed population were in treatment for one to five years, followed by 32% with six to ten years of treatment, and 11% with less than one year of treatment.

In conclusion, we believe that comorbidity can aggravate the drug-addiction prognosis in this specific client group. It will be necessary to develop systematic studies to obtain more and better information on this phenomenon.

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Chapter 15 **Psychiatric comorbidity in patients with substance misuse in Romania**

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Summary

In this chapter the authors present a retrospective study conducted on 304 patients with a psychiatric disorder due to psychoactive substance use. The patients were admitted to Timisoara Psychiatric Department during 2003. ICD-10 diagnostic criteria were used by senior psychiatrists from the staff as they are officially requested by the Romanian Ministry of Health. Data obtained from the patients' psychiatric records were analysed statistically. The majority of substance misuse patients had alcohol related disorders, followed by those with disorders due to multiple drugs or other psychoactive substance use. A wide range of ICD-10 disorders were found to be co-morbid with alcohol or multiple drug abuse or dependence.

În acest capitol autorii prezintă un studiu retrospectiv pe 304 pacienți cu tulburări psihice datorate consumului de substanțe psihoactive. Pacienții au fost internați în Clinica Psihiatrică Timișoara în anul 2003. Diagnosticurile au fost puse de către medicii primari psihiatrii din clinică utilizând criteriile ICD 10, admise oficial de către Ministerul Sănătății din România. Datele obținute din foile de observație ale pacienților au fost analizate statistic. Majoritatea pacienților au prezentat tulburări psihice legate de consumul de alcool, fiind urmați de cei cu abuz sau dependență la mai multe substanțe psihoactive. La pacienții cu tulburări psihice legate de abuzul sau dependența de alcool respectiv abuzul sau dependența la mai multe substanțe psihoactive au fost identificate mai multe tipuri de diagnostice psihiatrice co-morbide.

Introduction

The population of Romania according to the 2000 Census was 22,456,000. The Romanian administrative territory is represented by 44 counties. Timis County is the biggest county in terms of surface area (8.697 km²) and among the most densely populated counties with 690,000 inhabitants. Sixty per cent of its population lives in urban areas. The capital of Timis County is Timisoara (317,660 inhabitants). Timis County together with Caras-Severin County forms the relatively wealthy region of Banat in the south west of Romania. The ethnic distribution of its population is as follows: Romanian 83.4%, Hungarian 7.5%, Roma (Gypsies) 2.4%, German 2.1%, Serbs 2%, others 2.6%. [This does not add to 100%]

According to data available from the Romanian National Report on Drugs (Bumbac, 2002), although 86.3% of the Romanian population considers drugs a national problem, the level of information about them is low among Romanians. The lack of basic knowledge about illicit drugs could be partially

explained by the fact that the former communist regime succeeded in stopping the traffic of illicit drugs in Romania. In the post-communist era, Romania has become a transit country for drugs that are intended to reach Western Europe. Because in Romania the average income is still low, illicit drugs are overshadowed by the abuse of alcohol and nicotine. Nevertheless, the health care system must cope with an increasing use of illicit drugs. Cocaine, herbal cannabis (marijuana) and heroin are the drugs the best known by the Romanian public. Intravenous heroin seems to be the illicit drug the most abused and trafficked, followed by ecstasy. The age group with the highest risk for addiction is 15-24 years and a survey conducted among young people in their 9th school grade [age 15 years?] [age 15 years] revealed that 9.5% of them have tried illicit drugs at least once in their life (Bumbac, 2002).

The health and social care system in Timis County

The adult psychiatric unit of Timis County General Hospital is a 110-bed facility. This Unit functions under the umbrella of the Romanian Ministry of Health and Timisoara University of Medicine and Pharmacy, and provides 24-hour services. Name and address must be supplied by patients; nevertheless, information about patients is provided only on a specific request by a judge in a court.

The professionals working in the clinic are 10 psychiatrists, 15 nurses, 2 social workers, 2 psychologists, 2 counsellors (in family therapy and cognitive-behavioural therapy), 3 voluntary workers (generally medical students in their summer time hospital practice). The staff also includes a melothesapist, 3 kinetotherapists, one sociologist and 20 psychiatric trainees. The full-time staff complement consists of 5 persons, and the part-time staff of 51 professionals plus 3 voluntary workers.

The service is focused on mental health and substance misuse but is connected with medical social facilities, mobile psychiatric services and a psycho-social rehabilitation centre. It offers a:

- Residential care (accommodation, 3 meals per day) and a day centre (therapy, counselling, psychological treatment, social care such as help with housing/ finding work)
- Psychiatric care (assessment, therapy, substitution, detoxification, aversive treatment)

The Timis Unit collaborates with other medical units (intensive care, internal medicine, surgery, imaging services). Clients are actively referred to other services or vice-versa and, when it is strictly necessary, we share medical information with other medical services. The clients come to our service through self-referral, referral via carer, referral via GP or in-patient and out-patient units.

The psychoactive substances used by our patients are: alcohol, opiates (heroin, morphine, codeine etc), amphetamines (ecstasy), hallucinogens

(cannabis, volatile substances), benzodiazepines (valium, xanax), barbiturates, meprobamate, and trihexyphenidyl (Broflex - an anticholinergic). The mental health problems treated in our service include schizophrenia and other psychoses, mood disorders, phobic and anxiety disorders, and adjustment disorders.

All senior psychiatrists have long-term experience in the addiction field and those treating patients addicted to illicit drugs have attended specific training in substitution treatment with methadone.

With the increasing prevalence of drug addiction in our county we intend in the future to extend our collaboration with the Public Health Department focusing on epidemiological data regarding addiction and with Municipal and County Councils for funding issues.

Data on psychiatric comorbidity in patients with substance misuse admitted to the Timisoara Psychiatric Department

The records of all patients admitted in 2003 to the Timisoara Psychiatric Department (1,546 in-patients) were analysed retrospectively. A total of 346 in-patients met the ICD-10 criteria for substance misuse disorders but only 304 were statistically processed: there was insufficient data on the remaining 42. Among the 304 in-patients studied, 280 met the criteria for mental and behavioural disorders due to the use of alcohol (F10.X), Two patients met criteria for mental and behavioural disorders due to the use of volatile solvents (F18.X), One patient met the criteria for mental and behavioral disorders due to the use of hypnotics (F13.X) and 21 in-patients met criteria for mental and behavioural disorders due to multiple drug use and use of other psychoactive substances (F19.X).

The diagnoses were established by a senior psychiatrist working in our psychiatric department according to ICD-10 criteria. Special attention was given to clearly differentiating those symptoms that could be induced by substance misuse and another psychiatric comorbid disorder as well.

We have focused on two main samples: one with an F10.X diagnosis (280 in-patients that misuse only alcohol) and another sample with an F19.X diagnosis (21 inpatients that are multiple drug users: alcohol, psychotropic medication and illicit drugs). The first sample will be referred as the F10.X sample and the other one as F19.X sample. The fact that alcohol is the main addictive problem for our health care system could be explained by:

- The low level of economic performance in Romania makes illicit drugs less accessible to a large number of young people.
- Alcohol is the substance of abuse most culturally accepted by a large proportion of the population regardless ethnicity, religion, gender, etc.
- Prices for alcoholic drinks are very permissive for all categories of population compared to other countries in Europe.

- The lack of specific legislation until recently results in a still-developing specialised network for patients with mental health problems due to addictive behaviours.

The statistical analysis was performed using a special designed program for statistical processing (STATISTICA). The simple and cumulative frequencies, percentage, average means and standard deviations were calculated for both samples. As many data were categorical in nature, the tests performed included the χ^2 (chi-square) test. For numerical data we have performed the Pearson correlation test (for the F10.X sample of 280 patients) and the Spearman R correlation test (for the F19.X sample of 21 patients).

From examining the demographic data (Table 15.1) it was found that:

- In both F10.X and F19.X samples, the majority of patients were males with a smaller male: female ratio amongst the multiple drug users (F19.X). In the F10.X sample, we found a statistically significant difference ($\chi^2 = 38.18$, $df = 2$, $p < 0.0001$) regarding the type of alcohol preferred and the gender, indicating that women more frequently use wine than men (who prefer distilled spirits).
- The mean age of the whole sample was 46.70, with a higher average age in the F10.X sample. There is a positive correlation between age and type of alcohol consumed ($p < 0.05$, $R = 0.29$). As age increases distilled spirits are preferred by the patients belonging to F10.X sample. A negative correlation was found between age and use of trihexyphenidyl ($p < 0.05$, $R = -0.50$) and herbal cannabis (marijuana) ($p = 0.05$, $R = -0.43$) in F19.X sample. The younger the patients are the greater is the tendency to use trihexyphenidyl and herbal cannabis (marijuana).
- The majority of patients in both samples have an educational level between the 9th and 12th grades.
- The percentage of unemployed patients was greater in the F19.X sample than in the F10.X sample. A statistically significant difference was found in the F10.X sample between employment status and type of alcoholic beverage. There are more unemployed persons among those who consume distilled spirits more frequently than among the ones who use wine and beer ($\chi^2 = 17.11$, $df = 6$, $p = 0.008$).
- There is a greater percentage of unmarried patients in the F19.X sample than in the F10.X sample.
- In the whole sample the most frequent region of birth after Banat was Transylvania (neighbouring region to Banat) followed by Moldova (situated in north-east Romania, far from Banat). Although Oltenia is a region close to Banat, more patients come from Moldova (4.93% versus 13.48%).
- Most patients in the global sample live in urban areas.
- As it might be expected, the ethnic distribution of the whole sample is similar to that found in the general population of Banat. In the multiple drug use sample the percentage of Hungarians was two times greater than in the F10.X sample and the whole sample respectively.

Table 15.1: Demographic data for F10.X sample, for F19.X sample and for the whole sample in Timisoara⁽¹⁾

| Sample | | F10.X (n = 280) | | F19.X (n = 21) | | Total (n = 304) | |
|---|--------------------|-----------------|-------|----------------|-------|-----------------|-------|
| | | n | % | n | % | n | % |
| Gender | Male | 248 | 88.57 | 14 | 66.66 | 263 | 86.52 |
| | Female | 32 | 11.42 | 7 | 33.33 | 41 | 13.48 |
| Age (years) | Mean | | 47.38 | | 39.23 | | 46.70 |
| | Standard deviation | | 11.13 | | 14.37 | | 11.62 |
| | Minimum | | 18 | | 18 | | 18 |
| | Maximum | | 76 | | 66 | | 76 |
| Educational level (years) | 0 | 3 | 1.07 | 0 | 0 | 4 | 1.31 |
| | 1-4 | 5 | 1.78 | 0 | 0 | 5 | 1.64 |
| | 5-8 | 59 | 21.07 | 5 | 23.80 | 66 | 21.71 |
| | 9-12 | 186 | 66.42 | 13 | 61.9 | 199 | 65.46 |
| | University | 27 | 9.64 | 3 | 14.28 | 30 | 9.86 |
| Employment status | Student | 1 | 0.35 | 3 | 14.28 | 4 | 1.31 |
| | Employed | 100 | 35.71 | 5 | 23.80 | 106 | 34.86 |
| | Unemployed | 66 | 23.57 | 9 | 42.85 | 77 | 25.32 |
| | Retired | 113 | 40.35 | 4 | 19.04 | 117 | 58.22 |
| Marital status | Married | 189 | 67.50 | 9 | 42.85 | 199 | 65.46 |
| | Single | 40 | 14.28 | 8 | 38.09 | 50 | 16.44 |
| | Divorced | 46 | 16.42 | 4 | 19.04 | 50 | 16.44 |
| | Widowed | 5 | 1.78 | 0 | 0 | 5 | 1.64 |
| Region of birth (Romanian historical regions) | Banat | 137 | 48.92 | 17 | 80.95 | 156 | 51.31 |
| | Transylvania | 78 | 27.85 | 3 | 14.28 | 82 | 26.97 |
| | Moldova | 41 | 14.64 | 0 | 0 | 41 | 13.48 |
| | Oltenia | 15 | 5.35 | 0 | 0 | 15 | 4.93 |
| | Muntenia | 8 | 2.85 | 1 | 4.76 | 9 | 2.96 |
| | Other Country | 1 | 0.35 | 0 | 0 | 1 | 0.32 |
| Current residence | Urban | 192 | 68.57 | 18 | 85.71 | 212 | 69.73 |
| | Rural | 88 | 31.42 | 3 | 14.28 | 92 | 30.26 |
| Ethnicity | Romanian | 235 | 83.92 | 14 | 66.66 | 251 | 82.56 |
| | Hungarian | 24 | 8.57 | 4 | 19.04 | 29 | 9.53 |
| | Serbian | 7 | 2.50 | 2 | 9.52 | 9 | 2.96 |
| | German | 5 | 1.78 | 1 | 4.76 | 6 | 1.97 |
| | Polish | 4 | 1.42 | 0 | 0 | 4 | 1.31 |
| | Ukrainian | 3 | 1.07 | 0 | 0 | 3 | 0.98 |
| | Bulgarian | 2 | 0.71 | 0 | 0 | 2 | 0.65 |

Table 15.2: Alcohol misuse diagnoses for the F10.X sample in Timisoara

| ICD-10 code | ICD-10 diagnosis | Number n=280 | Percentage % |
|-------------|--|-----------------|-----------------|
| F10.1 | Harmful use | 45 | 16.07 |
| F10.20 | Dependence syndrome currently abstinent | 13 | 4.64 |
| F10.21 | Dependence syndrome currently abstinent but in a protected environment | 1 | 0.35 |
| F10.23 | Dependence syndrome currently abstinent, but receiving treatment with aversive or blocking drugs | 2 | 0.71 |
| F10.24 | Dependence syndrome currently using the substance (active dependence) | 42 | 15 |
| F10.25 | Dependence syndrome continuous use | 41 | 14.64 |
| F10.26 | Dependence syndrome episodic use (dipsomania) | 15 | 5.35 |
| F10.30 | Withdrawal state uncomplicated | 50 | 17.85 |
| F10.31 | Withdrawal state with convulsions | 5 | 1.78 |
| F10.40 | Withdrawal state with delirium without convulsions | 56 | 20 |
| F10.41 | Withdrawal state with delirium with convulsions | 5 | 1.78 |
| F10.50 | Psychotic disorder schizophrenia-like | 1 | 0.35 |
| F10.52 | Psychotic disorder predominantly hallucinatory | 1 | 0.35 |
| F10.60 | Amnestic syndrome | 1 | 0.35 |
| F10.74 | Other persisting cognitive impairment | 2 | 0.71 |

There was a statistically significant difference ($\chi^2 = 94.75$, $p < 0.0001$) between numbers of patients presenting with the following ICD-10 diagnoses: F10.4 (delirium tremens), F10.3 (withdrawal state) and F10.24 (dependence syndrome currently using the substance) and the rest, in respect of the preferred beverage. Patients presenting with the above-mentioned diagnoses are the ones who tend to drink mostly distilled spirits.

Table 15.3: Multiple drug use diagnoses for the F19.X sample in Timisoara

| ICD-10 code | ICD-10 diagnostic | Number n=21 | Percentage % |
|-------------|--|----------------|-----------------|
| F19.1 | Harmful use | 3 | 14.28 |
| F19.22 | Dependence syndrome currently on clinically supervised maintenance or replacement regime | 1 | 4.76 |
| F19.24 | Dependence syndrome currently using the substance (active dependence) | 6 | 28.57 |
| F19.25 | Dependence syndrome continuous use | 5 | 23.80 |
| F19.26 | Dependence syndrome episodic use (dipsomania) | 1 | 4.76 |
| F19.30 | Withdrawal state uncomplicated | 3 | 14.28 |
| F19.40 | Withdrawal state with delirium without convulsions | 1 | 4.76 |
| F19.50 | Psychotic disorder schizophrenia-like | 1 | 4.76 |

Table 15.4: Drugs and combinations used for the multiple drug misuse sample (F19.X) in Timisoara

| Drugs | Number n =21 | Percentage % |
|---|-----------------|-----------------|
| alcohol + benzodiazepines | 6 | 28.57 |
| alcohol + benzodiazepines + meprobamate | 3 | 14.28 |
| alcohol + barbiturates + codeine | 2 | 9.52 |
| alcohol + meprobamate | 1 | 4.76 |
| alcohol + morphine | 1 | 4.76 |
| alcohol + herbal cannabis (marijuana) | 1 | 4.76 |
| alcohol + trihexyphenidyl | 1 | 4.76 |
| ecstasy + trihexyphenidyl | 1 | 4.76 |
| alcohol + benzodiazepines + barbiturates | 1 | 4.76 |
| alcohol + ecstasy + herbal cannabis (marijuana) | 1 | 4.76 |
| benzodiazepines + barbiturates + meprobamate | 1 | 4.76 |
| alcohol + benzodiazepines + heroin + herbal cannabis (marijuana) | 1 | 4.76 |
| alcohol + benzodiazepines + cocaine + herbal cannabis (marijuana) | 1 | 4.76 |

Table 15.2 presents the diagnostic details of those in the F10.X (alcohol misuse) sample, and Table 15.3 those for the F19.X (Multiple drug use) sample. In the whole sample there were 280 patients addicted only to alcohol (F10.X) and 19 addicted to alcohol and at least one other psychoactive substance (Table 15.4). As a result, 6.35% of all patients with alcohol misuse are also addicted to other substances. In a study published by Ross in 1988,

cited by Babor (2003), 25% of those who are addicted to alcohol have also comorbid drug abuse or dependence. In our sample, the low percentage of these patients could be explained by a lower level of economic activity compared with western European countries.

Table 15.5: Psychiatric comorbidity of the whole sample of patients in Timisoara

| ICD-10 code | ICD-10 diagnoses | Number (n = 304) | Percentage |
|-------------|--|---------------------|------------|
| F06 | Organic, including symptomatic, mental disorders Other mental disorders due to brain damage and dysfunction | 2 | 0.65 |
| F22 | Schizophrenia, schizotype and delusional disorders persistent delusional disorders | 13 | 4.27 |
| F20 | schizophrenia | 11 | 3.61 |
| F25 | schizoaffective disorder | 9 | 2.96 |
| F23 | acute and transient psychotic disorders | 4 | 1.31 |
| F32 | Mood (affective) disorders depressive episode | 43 | 14.14 |
| F33 | recurrent depressive disorder | 20 | 6.57 |
| F31 | bipolar affective disorder | 11 | 3.61 |
| F34 | persistent mood disorders | 10 | 3.28 |
| F30 | manic episode | 1 | 0.32 |
| F41 | Neurotic, stress related and somatoform disorders other anxiety disorders | 36 | 11.84 |
| F43.2 | adjustment disorder | 13 | 4.27 |
| F40 | phobic anxiety disorders | 1 | 0.32 |
| F42 | obsessive-compulsive disorder | 1 | 0.32 |
| F60.5 | Disorders of adult personality and behaviour anankastic personality disorder | 23 | 7.56 |
| F60.3 | emotionally unstable personality disorder | 20 | 6.57 |
| F60.4 | histrionic personality disorder | 17 | 5.59 |
| F60.6 | anxious/avoidant personality disorder | 15 | 4.93 |
| F60.7 | dependent personality disorder | 9 | 2.96 |
| F60.2 | dissocial personality disorder | 5 | 1.64 |
| F60.0 | paranoid personality disorder | 2 | 0.65 |
| F60.1 | schizoid personality disorder | 1 | 0.32 |
| F70 | Mental retardation | 6 | 1.97 |

Comorbidity with schizophrenia, schizotype and delusional disorders (F2X)

About one-eighth (12.15%) of patients in the whole sample have an F2.X diagnosis. As indicated in Table 15.5, the most frequent F2.X comorbid diagnoses were persistent delusional disorders (4.27%) followed by schizophrenia (3.61%) and schizoaffective disorder (2.96%).

There were 6 schizophrenic patients with alcohol abuse (F10.1) and 5 with alcohol dependence (F10.2). The most frequent form was paranoid schizophrenia (9 out of 11 patients). Among the patients with multiple drug misuse we found no schizophrenics. Eight patients with persistent delusional disorders are alcohol dependents and the remaining five are alcohol abusers. In the F10.X sample we found that those patients who prefer drinking distilled spirits more than wine and beer, were more likely to have a comorbid diagnosis of F22 - persistent delusional disorders ($\chi^2 = 98.68$, $df = 22$, $p < 0.0001$).

Among the schizoaffective patients, 2 were alcohol dependent, one of them being also addicted to benzodiazepines, cocaine and marijuana. The remaining 7 patients were alcohol abusers.

There is a positive correlation ($p = 0.03$, $R = 0.46$) between addiction to herbal cannabis (marijuana) and F2X comorbidity. It is well-known from the literature that cannabis may precipitate a psychotic (schizophrenic or manic) episode or may aggravate the psychotic symptoms (Gruber and Pope 2003).

Comorbidity with mood (affective) disorders (F3X)

Just over one-quarter (27.96%) of patients in the whole sample have had an F3.X diagnosis. Among these, two diagnoses predominate: depressive episode (14.14%) and recurrent depressive disorder (6.57%).

The patients with depressive episode (F32) presented the following distribution; 6 patients with a mild depressive episode, 22 patients with moderate depressive episode and 15 patients with severe depressive episode (12 without psychotic symptoms and 3 with psychotic symptoms). Eight patients with severe depressive episode were identified as having a suicidal risk (6 males and 2 females).

Among the patients with recurrent depressive disorder (F33) we have found: one patient with a current mild episode, 11 patients with current moderate episodes and 8 patients with a current severe episode (5 without psychotic symptoms and 3 with psychotic symptoms). Two male patients with recurrent depressive disorder were identified as having a suicidal risk. These figures indicate a predominance of moderate and severe depressive episodes in both F32 and F33 patients, respectively.

Findings from psychiatric literature (Schmidt, 2001) indicate that around 40% of patients admitted to a psychiatric clinic for an alcohol disorder also present recognizable depressive syndromes. In our sample depressive symptoms are observed not only in the F32 (14.14%) and F33 (6.57%) diagnoses but also in F31.3 (0.65%), F34.1 (1.64%), F41.2 (11.51%) and F43.2 (4.27%), amounting to a total of 38.78%.

In some cases the temporal relation between depression and alcohol misuse disorder cannot be established. Regardless of this temporal relation the

prognosis of patients with both comorbid conditions is worse than of those who present these disorders separately (Hasin *et al.*, 2002).

One patient had a manic episode and 11 patients (3.61%) had bipolar affective disorder (two with current episode hypomanic, four with current episode manic without psychotic symptoms, two with current episode manic with psychotic symptoms, two with current mild episodes or moderate depression and one currently in remission). There is a high degree of comorbidity between bipolar disorder and alcohol misuse disorder (38% lifetime prevalence of alcohol misuse in bipolar patients) in studies conducted on clinical samples (Frye *et al.*, 2003).

In respect of the persistent mood (affective) disorders, cyclothymia and dysthymia were found to the same extent (1.64%).

A positive correlation ($p = 0.003$, $R = 0.60$) was found in the F19.X sample between addiction to meprobamate and the comorbid F3.X diagnosis. This diagnosis is found more frequently among meprobamate users.

Comorbidity with neurotic, stress related and somatoform disorders (F4X)

Among this heterogenic cluster of disorders, in our sample two diagnoses predominate: F41.2 - mixed anxiety and depressive disorder (11.51%) and F43.2 – adjustment disorders (4.27%). Panic disorder (included along with F41.2 among other anxiety disorders F41), obsessive-compulsive disorder (F42) and phobic anxiety disorders (F41) are represented, each of them, in our sample by one patient. In our sample mixed anxiety and depressive disorder has a disproportionately higher percentage compared with panic disorder and phobic disorders. This could be explained by the fact that:

- Most of the patients with anxiety disorders such as panic and phobic disorder receive treatment in an outpatient setting in our mental health system.
- Mixed anxiety and depressive disorder which is according to Melzer cited by Tyrer (2001) the most frequent mental disorder in epidemiological studies is also common in clinical populations.
- Although DSM-IV includes this condition in the category 300.00 (anxiety disorders not otherwise specified), studies using DSM criteria focus primarily on anxiety disorders such as panic disorders, or phobic disorders avoiding as much as possible diagnoses of “not otherwise specified” type.
- There maybe cross-cultural differences in clinical expressiveness of anxiety disorders.
- There is no perfect overlap between ICD-10 and DSM-III-R or DSM IV.

In the psychiatric literature there are reports of a wide range of prevalence (20% to 70%) of anxiety disorders among alcoholic patients (Mann, 2000). The possible reasons for these differences in prevalence may be that:

- In some studies alcoholic dependence was not clearly delimited from the broader area of problems related to drinking.

- Anxiety symptoms were not clearly delimited from anxiety disorders.

In the F10.X sample we found that those patients who prefer drinking distilled spirits more than wine and beer, were more likely to have a comorbid diagnosis of F41.2 - mixed anxiety and depressive disorder ($\chi^2 = 51.31$, $df = 18$, $p < 0.0001$). Another positive correlation ($p = 0.0005$, $R = 0.69$) in the F19.X sample was found between addiction to barbiturates and F41.2 comorbidity (mixed anxiety and depressive disorder).

Comorbidity with personality disorders (F6X)

A personality disorder was found in 29.93% of the patients from whole sample. Three personality disorders were found more frequent: anankastic personality disorder (7.56%), emotionally unstable personality disorder (6.57%) and histrionic personality disorder (5.59%).

There are differences between F10.X and F19.X samples regarding the distribution of the personality disorders types as follows:

- In the F10.X sample (280 patients) anankastic personality disorder predominates (8.21%) followed by emotionally unstable, anxious (avoidant) and histrionic personality disorders (5.35%, 5% and 4.64% respectively).
- In the F19.X sample (21 patients) emotionally unstable and histrionic personality disorders predominate (23.8% and 14.28% respectively).

Data from clinical studies show that borderline personality disorder (included in ICD-10 as a type of emotionally unstable personality disorder) was significantly associated with current substance use disorders excluding alcohol and cannabis (Skodol *et al.*, 1999).

Antisocial personality disorder (which has as its ICD-10 correspondent the dissocial personality disorder) was found in 66% patients in some clinical studies on inpatient subjects (Ross *et al.*, 2003). In our clinical sample the percentage of dissocial personality disorder was 1.64%. Nevertheless, special attention must be paid to the overlap between diagnostic criteria of mental and behavioural disorders due to use of alcohol and the criteria of dissocial personality disorder. In order to be a true comorbid condition, the dissocial personality disorder must predate the alcohol misuse disorder and must show specific symptoms before the age of 15 years (Schuckit, 2000).

In our study 5 patients from the F10.X sample have also met criteria for personality or behavior disorder due to use of alcohol (F10.71).

Other comorbidities

Two patients from the F10.X sample had also an F06.7 diagnosis (mild cognitive disorder). Six patients had an F70 diagnostic (mental retardation): four from the F10X sample, one from the F19.X sample and one with volatile solvents misuse F18.X.

Conclusions

In summary, 210 patients (75%) from the F10.X sample and 18 patients (85.71%) from the F19.X sample have had at least one psychiatric co-morbid disorder.

The patient addicted to hypnotics (F13.25) had as comorbid psychiatric disorders F41.2 (mixed anxiety and depressive disorder) and histrionic personality disorder (F60.4). Both patients with volatile solvents misuse (F18.5 and F18.24 respectively) have psychiatric comorbidity such as F70 (mental retardation) and F60.2 (dissocial personality disorder) respectively.

The high comorbidity rates identified in our clinical sample of patients misusing alcohol and other psychoactive substances could be explained by the following factors (Babor, 2003):

- A person having at least two comorbid disorders is more likely to use the health services (Berkson's bias).
- Some of the comorbid psychiatric disorders could share one or more risk factors (i.e. anxiety with depression, mental disorders due to alcohol with those due to other psychoactive substance).
- Some conditions (i.e. anxiety and depression) also have a high prevalence in the general population, so their presence in clinical samples may occur largely by chance.

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Chapter 16 **Psychiatric comorbidity in drug abusers in Spain**

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Summary

In Spain, the treatment of psychiatric comorbidity in drug dependent patients varies across the different autonomous communities. In Catalonia, the public system of treatment for health problems is divided into three different networks: the general medical health care network, the mental health network and the substance abuse disorders network. Since 1994, an effort has been made to integrate the treatment of dual diagnosis patients. The main objectives achieved have been: the training in dual diagnoses of both professionals from mental health care network and from substance abuse disorders network; the creation of two dual diagnosis units for inpatients; and the development of dual diagnosis treatment guidelines. The Drug Addiction Department of the Hospital del Mar has as one of its interests the diagnosis and treatment of dual diagnosis patients. The prevalence of dual diagnosis in those attending different treatment services ranges from 11% in emergency rooms to 48% in the drug dependency unit. Different investigations have been done in this field.

En España, la atención de la comorbilidad psiquiátrica en pacientes drogodependientes es diferente según las distintas comunidades autónomas. En Catalunya, el sistema público de atención a los problemas de salud se realiza a través de tres redes diferentes: la red de atención médica general, la red de atención a los trastornos mentales y la red de atención a los drogodependientes. Desde 1994, se está realizando un esfuerzo en la integración de la atención de los pacientes con diagnóstico dual. Los principales objetivos conseguidos han sido: la formación en patología dual de los profesionales que trabajan en la red de salud mental y en la red de drogodependencias; la creación de unidades específicas de ingresos para pacientes con patología dual; y el desarrollo de guías clínicas para el tratamiento de la patología dual. Para la Unidad de Toxicomanías de l'Institut d'Atenció Psiquiàtrica Salut Mental i Toxicomanies, el diagnóstico y tratamiento de la patología dual ha sido una de las principales prioridades. La prevalencia de patología dual en los diferentes recursos de atención varía entre el 11% en el Servicio de Urgencias hasta el 48% en la Unidad de Drogodependencias. Así mismo se están llevando acabo diversos proyectos de investigación en este área.

Introduction

Diagnosing and treating psychiatric comorbidity in substance abusers in Spain has become an area of growing importance over the last 10 years. The co-occurrence of substance abuse and other psychiatric disorders (also termed dual diagnosis), may have important consequences from the health and social

points of view. Psychiatric comorbidity in substance abusers has been associated with an increased risk of infections (i.e. HIV, hepatitis B and C, tuberculosis); more admissions into emergency rooms, suicide, aggressive and other disruptive behaviour (Mueser *et al.*, 2003).

The treatment of psychiatric comorbidity is different throughout Spain. The differences are mainly related to the model of care of substance abuse and mental health disorders in the same or in different networks. In this review we will focus on the situation in Catalonia, an autonomic region in the northeast of Spain.

Current situation in Catalonia

In Catalonia, the public system of treatment for health problems is divided into three different networks: the 'general medical health care network', which takes care of all health related problems except mental problems, the 'mental health network' and the 'substance abuse disorders network'. This system shows many problems, mainly in the care of patients with dual diagnosis. In many cases, these patients are sent back and forth between the mental health- and the substance abuse disorders network.

Due to these problems, in 1994, the Health Department in Catalonia organized a taskforce with representative professionals of both networks with the objective of reaching agreements to improve the integrated treatment of dual diagnosis patients. The main conclusions were that, firstly, the traditional sequential or parallel treatment approaches to dual disorders usually failed to account for the interactive nature of mental illness and substance use disorders; and, secondly, that the system excluded the more severe dual diagnosis patients from both mental health and substance abuse networks. To improve the situation, a more integrated model was proposed and the following steps of action were decided:

1. The training of professionals working in the drug abuse network in mental health disorder.
2. The training of professionals working in the mental health network in substance use disorders.
3. The creation of 'dual diagnosis units' for admission of patients with severe concomitant substance and non-substance use disorders who could not be admitted into current psychiatric wards or into detoxification units..

Dual diagnosis units

Dual diagnosis units are hospitalisation units for patients presenting with concurrent severe mental illness and substance use disorders, whose characteristics make them very difficult to be attended to in the mental health or drug addiction network services. The main objective is to offer a specific inpatient treatment, mainly in stabilising an accurate diagnosis and therapeutic approach to both disorders. The length of stay is supposed to be

short, just the time needed until the treatment can be continued in an out-patient setting. To ensure this, co-ordination mechanisms are needed in order to establish a therapeutic treatment plan for every patient.

Integrated care in dual diagnosis units

The continuum of dual-disorder services must involve vertical as well as horizontal integration. All services need to be co-ordinated, so that the approach to substance abuse is consistent and continuous. To achieve this some inclusion and exclusion criteria must be followed.

- *Inclusion criteria:* patients have to simultaneously fulfil three conditions: an acute severe mental disorder, a substance use disorder and a behavioural disturbance or severe clinical status which makes an out-patient setting approach difficult.
- *Exclusion criteria:* substance use disorder without severe mental disorder or behaviour disorder (they are not detoxification units) and a severe somatic comorbidity that requires priority assistance in a general hospital (medical severity).

Special emphasis has to be made in reference to the fact that although they accept compulsory admission for psychiatric reasons (for example psychosis without insight), they do not accept patients so that they can serve a prison sentence there (they do not provide jail diversion programmes).

The dual diagnosis unit serves both the mental health and the substance abuse disorders networks. To be admitted in the dual diagnosis unit, patients have to be referred by a professional from the networks; no admission from general emergency rooms is provided for. The discharge process takes place when the main objective of the admission has been achieved, and the patient is sent to continue the treatment in the centre that originally referred him/her to the dual diagnosis unit.

In 2001 the first dual diagnosis unit was opened in a psychiatric hospital with the objective of taking care of the admissions of acute dual diagnosis patients in the whole of Catalonia. This unit admitted patients with any kind of substance-related disorder. Later, in 2002, another dual diagnosis unit only for patients with an alcohol disorder was created. This unit was also located in a psychiatric hospital and covers the whole of Catalonia. In the near future more dual diagnosis units, situated in general hospitals in urban areas, are foreseen.

Dual diagnosis treatment guidelines

Although there are many gaps in our knowledge of the evidence-based treatment approach to dually diagnosed subjects, consensus guidelines are one of the useful tools for avoiding treatment disparity in clinical procedures and improving good practice. The first dual diagnosis treatment guidelines were published in Catalonia in 2002 (San and Casas, 2002) to help clinicians

in taking decisions for the treatment of dual diagnosis patients. The guidelines were the result of a complex process of discussion by some expert psychiatrists in the drug abuse field who, after several sessions, offered therapeutic guidelines based on the best evidence available.

The general recommendations of the guidelines included:

- Patients with dual diagnosis need an integrated treatment that includes elements from both psychiatric and substance abuse therapy.
- The adequate treatment of clinical symptoms is required.
- It is necessary to establish an accurate substance abuse and psychiatric history to recognise the relationships between substance abuse and other psychiatric symptoms.
- The assessment of the patient during drug abstinence periods will allow clarification of the origin of the symptoms.
- To diagnose primary disorders only if the symptoms reappear after a significant abstinence period.

The time-schedule of therapeutic decisions suggested was:

- Treating vital risk events.
- Treating vital risk situations associated with substance use (intoxication and withdrawal disorders).
- Assessment of suicidal risk.
- To decide if the severity of disorder needs admission into hospital or can be treated in an outpatient centre.
- To reassess the patient after the intoxication or withdrawal symptom period.
- If psychiatric symptoms are severe (for example hallucinations or delusions), pharmacological treatment is recommended.
- If there is evidence of induced disorders, once the symptoms improve reduction of pharmacological treatment can be tried; if symptoms reappear, general psychiatric guidelines should be followed.

The guidelines provided recommendations for specific dual diagnosis disorders: psychosis, depression, anxiety, personality disorders. Also recommendations on the management of subjects with dual diagnoses in the emergency room were included.

Later, following a similar system of consensus-building among the more representative psychiatrists in the drug abuse field in the whole of Spain, the Spanish Society of Psychiatry published the National Consensus for Dual Diagnoses Treatment (San, 2004)

Dual diagnosis in the Institute of Psychiatry, Mental Health and Drug Addiction (IAPS) of Barcelona: Epidemiological, clinical and research approaches

Recently the Drug Addiction Unit of the Hospital del Mar was integrated into the Institute of Psychiatry, Mental Health and Drug Addiction (IAPS) of Barcelona. The IAPS looks after more than 50% of psychiatric admissions in the city. The IAPS includes different clinical resources, located in different areas of the city. Some are located in a general teaching hospital (Hospital del Mar): a general psychiatric ward, a drug addiction ward and an emergency room, others in a psychiatric hospital (Municipal Institute of Psychiatry), and others in the community: community mental health centre and outpatient drug abuse centre (CAS-Barceloneta).

The team at the Drug Addiction Unit is responsible for providing the clinical support to and/or management of substance use related disorders in the different services of the IAPS. In this way, dual diagnoses disorders have become one of the priorities of the Drug Abuse Unit.

The current status of the situation in relation to epidemiological, clinical and research approaches is now presented.

Psychiatric emergency room

The facility is a specialised psychiatric emergency area within the general emergency department located in a general teaching hospital (Hospital del Mar). Admissions are in relation to acute psychiatric disorders or substance use disorders (without medical severity). The prevalence of dual diagnosis in the patients cared for in the psychiatric emergency room is about 11%. Table X.1 describes in more detail the different psychiatric disorders.

Drug addiction ward

The ward is a 6-bed unit offering assessment and medically assisted withdrawal to individuals with substance dependence disorder. The ward is located in the psychiatric department of a general teaching hospital in Barcelona. It is staffed by psychiatrists, nurses and an internal medicine consultant. Criteria for admission to the unit include: substance abuse disorder with a risk of severe or medically complicated withdrawal symptoms (i.e. polydrug abuse), comorbid general medical conditions that make outpatient detoxification treatment unsafe, and a documented history of not engaging in or benefiting from treatment in outpatient services. Patients are recruited from different outpatient detoxification services in Barcelona. Admissions to the ward have to be voluntary and planned; there are no emergency admissions. Patients with psychiatric comorbidity that need a compulsory or urgent admission because of the severity of their psychiatric symptoms (e.g. acute psychosis or suicide risk) are admitted into the general psychiatric unit instead. During their stay in the unit, patients are assessed for physical and psychiatric comorbid disorders. Treatment consists of pharmacological detoxification according to general guidelines of the

department for each substance use diagnosis (i.e. methadone tapering to zero in case of heroin dependence, clonazepam tapering to zero for sedative dependence) with daily one-to-one assessment sessions. In reference to psychiatric comorbidity, around 49% of the patients admitted into the inpatient detoxification unit presented with some form of psychiatric comorbidity. Table X.1 describes the one-year prevalence of non-substance use disorders diagnosed

General psychiatric ward in a general hospital

The ward is a 10-bed unit offering treatment for any acute psychiatric illness that needs an intensive treatment as an inpatient. Most of the admissions come from the emergency room, and compulsory admissions are frequent. Due to its location in a general hospital, the ward particularly admits psychiatric patients with severe somatic comorbid illnesses. In reference to substance use comorbidity, around 26% of the patients admitted into the psychiatric ward presented with some form of substance use disorder comorbidity (Table 16.1).

Psychiatric hospital

The Municipal Institute of Psychiatry is a 90-bed psychiatric institute located in an isolated hospital that takes care of about 45% of all acute psychiatric admissions in the city of Barcelona. Most of the admissions come from the emergency room and compulsory admissions are very frequent. Severe psychiatric disorders (i.e. schizophrenia, bipolar disorders) are the most frequent diagnoses. The one-year prevalence of dual diagnoses among patients admitted into the psychiatric hospital is 12% (Table 16.1).

Drug abuse outpatient centre

The outpatient drug abuse centre is a community clinical resource that provides care for substance use disorders in one of the most deprived areas of the city. All substance abuse related disorders are treated, although about 50% are heroin dependent patients (most in methadone maintenance treatment). In recent years, with the start of a cocaine epidemic in Spain, an increase in new cases asking for treatment in relation to cocaine abuse/dependence has been noted. The one-year prevalence of dual diagnoses in the drug abuse outpatient centre is about 34% (Table 16.1)

Table 16.1: Prevalence (%) of dual diagnoses in different clinical resources of the Institute of Psychiatry, Mental Health and Drug Addiction (IAPS), in Barcelona, Spain

| | Emergency room | Drug addiction ward | General psychiatric ward | Psychiatric hospital | Drug abuse outpatient centre |
|----------------|----------------|---------------------|--------------------------|----------------------|------------------------------|
| Dual diagnosis | 11 | 49 | 26 | 12 | 34 |
| Disorders | | | | | |
| Mood | 28 | 31 | 47 | 7 | 46 |
| Psychosis | 20 | 4 | 18 | 61 | 16 |
| Anxiety | 13 | 4 | 6 | 0 | 16 |
| Personality | 31 | 59 | 27 | 13 | 60 |
| Other | 8 | 2 | 2 | 19 | 21 |

Research

Dual diagnosis is also one of the research interests of the Drug Abuse Unit at the Hospital del Mar. The main areas of investigation have been:

- The Spanish adaptation of diagnostic instruments useful for dual diagnoses purposes. In this area the most relevant objectives achieved have been the validation of the Spanish version of Cloninger *et al.*'s (1993) Temperament and Character Inventory in substance abusers population (Gutierrez *et al.*, 2001, 2002) and the translation and validation of the Spanish version of the Psychiatric Research Interview for Mental and Substance Use Disorders (PRISM) (Torrens *et al.*, 2004a).
- Epidemiological studies of psychiatric comorbidity in different populations of substance abusers. The populations studied have been opiate dependent subjects seeking treatment (Astals *et al.*, 2002); young opiate and cocaine users not seeking treatment (Rodriguez-Llera *et al.*, 2002); recreational MDMA (ecstasy) user's (Ginés *et al.*, 2004), substance abusers attending emergency rooms (Imaz *et al.*, 2002).
- The role of psychiatric comorbidity in the outcomes of drug abuse treatments: follow-up studies (Torrens *et al.*, 2004b); and systematic reviews (Torrens *et al.*, 2005)

Training

The Drug Abuse Unit of the Hospital del Mar is a reference training unit for professionals of both the drug abuse and mental health networks. In this sense some courses for training in dual diagnosis have been organised. Recently, training courses have been started for health professionals wishing to become expert in the use of the Spanish version of Psychiatric Research Interview for Mental and Substance Use Disorders (PRISM).

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Chapter 17 Services to persons with concomitant substance use disorders and other psychiatric disorders - the Swedish system

A Öjehagen

Summary

There are two separate systems with responsibility for treatment of substance use disorders and for treatment of psychiatric disorders respectively; i.e., local authorities and social services. Due to these separate systems, patients with concomitant substance use disorders and other psychiatric disorders have faced problems in getting integrated treatment and support.

The definition of misuse differs between the typical social services and health care departments. According to social services legislation misuse does not include dependence, whilst it has clearly defined criteria according to the healthcare diagnostic system (ICD-10). These differences mean that an individual can be assessed differently, and this can hamper the planning of treatment and other interventions. Problems surrounding people with comorbidity were noticed in connection with the psychiatry reforms of 1995, and special resources were allocated to ten projects in order to improve collaboration.

These projects were followed up after 18 months and five years. Two main models of integrated service were developed during the project period: treatment teams and co-ordination teams, both working well. At follow-up it was stressed that integration was facilitated by agreements to share personnel and other costs between the local authority and health care systems. During the 5-year follow-up there was an increased death rate, i.e. 7.8 times (SMR). Fifty-seven percent of subjects did not use alcohol or had a non-problematic consumption pattern. Sixty-eight per cent of the subjects had not used drugs.

Through these ten projects and other projects of an integrative nature going on in Sweden, there has been a focus on the needs of patients with concurrent substance use disorders and other psychiatric disorders. A network for dual diagnosis has been established, which follows research and experiences on these patients. During this year (2005) guidelines will become available on the treatment of substance use disorders, including comorbid substance use disorders.

Socialtjänsten och kommunerna har ansvar för vård och behandling av personer med alkohol/drogmissbruk, medan sjukvården och landstingen har ansvar för vården av psykiska sjukdomar. För personer som har både ett missbruk och en psykisk sjukdom har uppdelningen av vården mellan de olika huvudmännen medfört problem att få en samordnad behandling.

Definitionen på missbruk skiljer sig mellan socialtjänsten och sjukvården. Missbruk enligt Socialtjänstlagen inkluderar inte beroende, vilket har klart definierade kriterier enl. sjukvårdens diagnossystem (ICD-10). Socialtjänsten betonar istället psykiska och sociala konsekvenser till följd av missbruket och har inga klart definierade kriterier. Dessa skillnader innebär att man kan bli olika bedömd och det kan försvåra planeringen av behandling och andra insatser. Problemen kring personer med samsjuklighet uppmärksammades i samband med psykiatireformen 1995 och särskilda medel avsattes till 10 projekt för att förbättra samverkan.

Projekten har utvärderats efter 1.5 år och efter 5 år. Två modeller kring samverkan har utvecklats; dels "behandlingsteam", som inom detta tar hand om huvuddelen av patientens behov, dels "vårdplaneringsteam", där en koordinator samordnar vårdinsatserna kring patienten. Båda dessa fungerar väl men det är av vikt att samverkan beslutas centralt och fördelning av kostnader och personal preciseras. Dödligheten var förhöjd 7.9 gånger. Vid 5-årsuppföljningen hade 57% inget bruk av alkohol eller använde alkohol utan problem, och 68% av patienterna använde inte droger.

Som en följd av dessa och andra projekt för att samordna vården kring personer med samsjuklighet har dessa patienters vårdbehov uppmärksammats. Ett svenskt nätverk har bildats för att följa och tillvarata olika erfarenheter och forskning kring denna patientgrupp. Under 2005 beräknas Socialstyrelsens riktlinjer för behandling av alkohol- och drogmissbruk bli klara och i dessa kommer behandling vid samsjuklighet att ingå.

Introduction

The Swedish local authority and health care systems

In Sweden the local authority has the main responsibility for the treatment and prevention of substance use disorders, delivered by the municipalities, while detoxification occurs within the health care system. Mental disorders are managed within the mental health care system, and to some extent (those not in need of specialist treatment) within primary health care. Psychiatric health services also have responsibility for substance abusers in need of psychiatric treatment. There are separate financial support systems for the local authority and the health care systems.

Thus, most psychosocial treatment for substance abuse is delivered outside the health care system. However, there are a few specialised centres including both hospital and out-patient services, so called 'Addiction Centres', mainly sited in the largest cities: Stockholm, Gothenburg, Malmö and Uppsala. These centres co-operate with the local authority in the municipalities belonging to the catchment area. They often take care of the mental health problems among substance abusers. Before 2005 methadone treatment for opioid dependence was managed by certain specialised methadone clinics and was delivered to a maximum number of patients.

According to new guidelines agreed by the Swedish Board for Health and Welfare specialists in psychiatry belonging to an Addiction Centre are allowed to prescribe methadone and buprenorphine. Other pharmacological treatment of substance abusers is administered by the health care system.

Compulsory care

In Sweden there is one social law act on compulsory care for substance abusers, and another law on compulsory care for patients with severe mental disorders (i.e. psychotic states). In an acute situation with indications for both the compulsory laws, the psychiatric compulsory law is the primary one, but when there are no indications for this law the compulsory law for the substance abuse situation can be used.

Definition of substance abuse

In the social services legislation there is no definition of dependency. Instead the term 'abuse' is used, and it mainly concerns the consequences of substance abuse. Thus, the social definition of substance use problems differs from the dependence syndrome defined by ICD-10 or DSM-IV used in the health services. These differences may lead to misunderstandings in terms of the criteria for treatment of substance abusers. Prevailing models for the development of substance use disorders as well as how to treat substance abuse still differ between local authorities and the health care system.

Changes in the psychiatric health care system

During the last ten years a huge reduction of inpatient psychiatric treatment services has occurred in Sweden. This reduction means fewer places available for inpatient treatment, as well as for persons with concomitant psychiatric and substance use disorders. Furthermore, short-term inpatient detoxification has become less available, and thus the possibility of properly examining psychiatric comorbidity in substance abusers. During the same period there has been an increased focus on outpatient treatment for substance abusers and availability of residential care as well as compulsory care has decreased.

Concomitant substance use disorders and other psychiatric disorders

Since the responsibility for substance abusers' treatment was established by social legislation, the mental health services and general health services have been less involved in the treatment of substance abusers, except for detoxification or medical complications related to substance abuse. Therefore substance abusers in need of psychiatric examination have faced problems in getting consultations with a psychiatrist. They have often been recommended firstly to attend or to complete treatment for their substance abuse. Patients in psychiatric care have been recommended treatment for their substance abuse within the social services, while some do not like to be referred to the social care system. The National Prisons and Probation Administration also has an

interest in services to persons with concomitant substance abuse and other psychiatric disorders, since these problems are common among persons with legal problems. Concerns have been expressed regarding proper support arrangements for these persons, both when they are in prison and following release.

Thus, as in many other countries, persons with both a substance use disorder and another psychiatric disorder have met problems in trying to get proper treatment due to the segregation of medical health services and addiction treatment programmes. The treatment services for their disorders often have been parallel or sequential and seldom properly co-ordinated. When the mental health care reform, mentioned below, took place in 1995, special attention was drawn to patients with severe mental illness and concomitant substance abuse. Patients with other psychiatric disorders did not come within the remit of the projects presented below.

Swedish mental health care reform

In Sweden a reform of mental health care reform took place on 1 January 1995. The municipal social services were then given greater responsibility for patients who have a life-long psychiatric illness. As mentioned above, difficulties had been recognised in the co-ordination of treatment and support between psychiatric health care and social services for those with concomitant psychiatric and substance abuse disorders. A multi-centre study was initiated by the Department of Social Affairs aimed at improving the co-operation between the local services, psychiatric health care and social services, in respect of the care of severely mentally ill substance abusers. Thereby improvements in their substance use disorder mental illness and social situation would be hopefully facilitated.

Five-year follow-up study of projects aimed at improving co-operation between social authorities and psychiatric services for persons with severe mental illness

In the following pages some results from the multi-centre study will be presented with a focus on the 5-year follow-up of the ten projects that participated. Different models of co-ordination have been tried out. Furthermore, the financial support system around these projects differs. The Swedish Network for Dual Diagnoses, which was established after the project period, will be briefly outlined. Finally, some comments will be made on the present Swedish situation with increasing alcohol consumption and drug use, and the ongoing work by the Swedish Board for Health and Welfare on guidelines for treatment of substance use disorders including persons with dual diagnoses. Most data on the follow-up study has been presented earlier in 'Dual diagnoses, filling in the gap' (Öjehagen and Schaar, 2003). There is an extended report in Swedish (Öjehagen and Schaar, 2004).

Study design

Ten projects from different parts of Sweden participated, representing both rural and urban settings, running over a period of three years (1995-1998). In all 358 patients took part in the study. They were selected by the Swedish Board for Health and Welfare. The patients were known within the psychiatric health care system and/or local authority services as having both a substance use disorder and a severe mental disorder. The local psychiatrists performed the diagnoses before inclusion in the projects, and the patients gave informed consent to take part in the investigations at commencement and at follow-up. The first evaluation was performed after 18 months and a second follow-up after 5 years. At the 5-year follow-up eight projects participated with a follow-up interview. The death rate was followed up after 18 months and 5 years for all participants ($n = 358$).

Subjects

Initial characteristics are described in detail in a paper by Schaar and Öjehagen (2001). The mean age was 40 ± 9 years, 66% were men, 15% were married/cohabiting, 15% were ordinarily employed and 78% had their own residence. As many as 62% of the patients had previously made at least one suicide attempt. The patients had a low quality of life rating (Schaar and Öjehagen, 2003).

Methods

Psychiatric diagnoses

Initially psychiatric diagnoses were made according to *DSM-III-R, Axis I, Axis II and Axis V* (the Global Assessment of Functioning Scale, GAF) (American Psychiatric Association, 1987). The distribution of psychiatric diagnoses, Axis I and Axis II is presented in detail in a previous paper (Schaar and Öjehagen, 2001). For a more general view of the profile of psychiatric disorders, four diagnostic sub-groups were defined according to the initial inclusion diagnostic criteria of severe mental illness (Table 17.1).

Table 17.1: Psychiatric diagnoses of subjects at Swedish study commencement

| Substance use disorders (%) | | Severe mental disorders (%) | |
|-----------------------------|----|-----------------------------|----|
| Alcohol dependence | 77 | Psychosis | 28 |
| Illicit drugs | 33 | Depression | 18 |
| Legal drugs | 13 | Borderline | 24 |
| | | Others ⁽¹⁾ | 30 |

⁽¹⁾ 'Others' contains patients with other diagnoses, mostly anxiety disorders in combination with personality disorders.

In all, 62% had a personality disorder, and 40% had both an Axis I and an Axis II diagnosis. Among illicit drugs: amphetamine dependence was the most

common diagnosis (21%), followed by cannabis (10%), the least common was use of opiates (2%). Eleven percent of the patients were dependent on tranquillisers and/or sedatives. In all, 20% of the patients had more than one substance use disorder.

Other measurements used at commencement, after 18 months and 5 years

The severity of substance abuse was evaluated by the Addiction Severity Index (ASI), a semi-structured interview providing socio-demographic information on both past and recent problems in seven areas of life functioning; medical status, employment and self-support, alcohol use, drug use, legal status, family and social relationships and psychiatric symptoms. A composite score is derived from each area, based exclusively on the last 30-day period, ranging from 0.0 = no problem to 1.0 = most severe problem (McLellan *et al.*, 1992; Bergman *et al.*, 1996).

Psychological symptoms were estimated by the *Symptom Check List 90* (SCL-90), a self-report symptom inventory with 90-items rating distress on a 5-point scale, from 0 = "not at all" to 4 = "extremely". One of three global indices of distress is used in this presentation, the *Global Severity Index* (GSI) (Derogatis, 1979).

Quality of Life (QoL) was measured by the use of Cantril's ladder (Cantril, 1965), a global assessment included in the Lancashire life quality profile (Oliver *et al.*, 1996).

At 18 months and at 5 years the following estimates were added: *The Clinical Rating Scales (CRS) for Alcohol Use (AUS) and Drug Use (DUS)*, which have been developed for clinicians or case managers to assess and monitor substance use in persons with severe mental illness over time (in this study the previous six months). Each of these scales allocates substance usage to one of five categories: abstinent, use without impairment, abuse, dependence and dependence with institutionalisation (Mueser *et al.*, 1995).

Results of the co-operation study

Follow-up after 18 months

At the 18 month follow-up stage 288 patients (84%) were interviewed. During the last six months before follow-up 50% had no problems with alcohol/drugs (CRS), their psychological symptoms had decreased (GSI) and their quality of life had improved. Their social situation had stabilised, that is some had been awarded a disability pension, while few so far had returned to work. There were improvements in severity of abuse according to the composite score (ASI) in all areas except for employment (Schaar and Öjehagen, 2001).

Improvement according to different measurements was not related to gender, psychiatric diagnoses including substance abuse or to co-operation models. Comparisons of improvements between the ten projects were not possible, since they had different profiles as concerns mental disorders and substance

use disorders; some had more psychoses and some more drug abuse. Their availability of services differed as well. Unfortunately there was no control group giving treatment and co-operation on a routine basis.

Follow-up after 5 years

Mortality rate

From the start of the project 32 out of 358 persons (8.9%) had died: 5 out of 123 women (4%) and 27 out of 235 men (11%). These yielded Standardised Mortality Ratios (SMRs) as follows: all 7.9 (95% CI 5.5-11.2); women 6.5 (CI 2.1 -15.2); and men 8.3 (CI 3.3-8.8).

The death rate was increased among patients with psychosis, borderline/schizoid personality disorder and among 'other psychiatric diagnoses', but not among those with depressive disorder, which may be explained by a higher age in this group.

The SMR for those with initial alcohol dependence was 5.7 (CI 3.4-9.0) and for those with initial dependence on illicit drugs 16.7 (CI 9.1-28.0). The relative risk taking gender and age into account was increased 2.3 times among those dependent on illegal drugs compared to those with alcohol dependence.

Follow-up interviews

All but two projects took part in the 5-year follow-up. These two projects could not perform the follow-up interviews due to lack of financial support. Unfortunately, we reached only 92 out of 221 patients (42%) who had been interviewed after 18 months. In comparison to those we did not reach, these 92 patients initially more often had been diagnosed as having a psychosis, and more often as having alcohol dependence. Seventy-four patients (33%) refused to participate. Initially they more often had drug dependence and at the 18-month follow-up they had a worse outcome compared to those interviewed and to those 55 (25%) who we could not reach for a follow-up interview. Some patients from the latter group had moved out of the region.

During the six months prior to follow-up 23% of the persons interviewed had abstained from alcohol consumption and 34% had consumed alcohol without problems according to the Clinical Rating Scale. Sixty-eight per cent of the subjects had not used drugs.

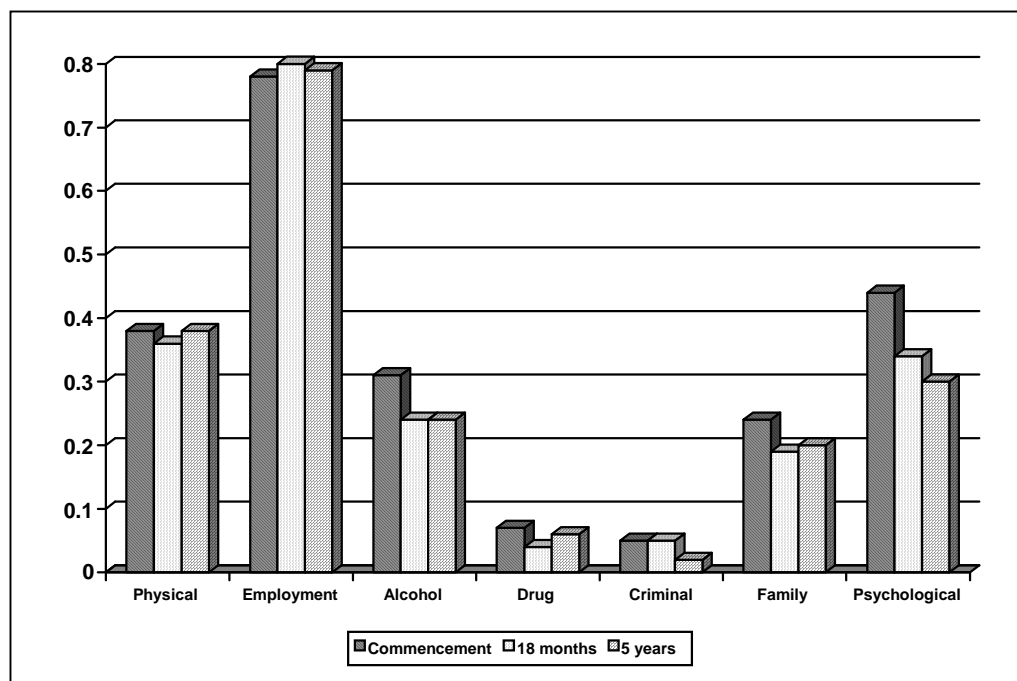
Psychological symptoms (GSI), *global functioning* (GAF) and *Quality of Life* (OI) had all improved at the 18-month follow-up as compared to the start of the project, but for the period from 18 months to five years there had been no further significant improvement (see Table 17.2). There were no differences between the projects.

Table 17.2: Progress for different measures at different stages of Swedish study

| n= 92 | Baseline | 18 months | 5 years |
|-------------|----------|-------------|------------|
| GSI (0–4) | 1.3±0.7 | 1.0±0.7 *** | 1.0±0.7 ns |
| GAF (10–90) | 49±11 | 57±14 *** | 59±15 ns |
| OI (0–100) | 40±27 | 58±23 *** | 61±24 ns |

*** p<.001, Wilcoxon on rank test

A comparison between ASI composite scores as measured initially, after 18 months and after five years has been made. At 18 months follow-up alcohol, drug, and psychiatric problems had improved. At 5-year follow-up legal matters and psychiatric problems had improved (see Figure 17.1). The social situation at follow-up was as follows: 24% were married/cohabiting, 63% had a disability pension or were on long-term sick leave, and 80% had an apartment or a flat.

Figure 17.1: ASI composite score at various stages of Swedish study

Use of treatment methods

As concerns treatment methods, all projects stress the need for integration of the treatments of both disorders. They point out the use of structured methods as concerns substance abuse, that is, CBT (Cognitive Behavioural Therapy), DBT (Dialectic Behavioural Therapy), motivational strategies and the use of contracts including drug use control.

Co-operation models

Among the ten projects, two models of co-operation were used. At the start of the study most projects aimed to co-ordinate assessment and treatment planning, structured in different ways, where most treatment and support were delivered by the ordinary services (social and psychiatric services) - *co-ordination team*. In two projects the treatment members themselves gave treatment and support - *treatment team*. These teams had been inspired by the assertive community treatment used in United States for example in New Hampshire (Drake *et al.*, 1998).

After five years two *co-ordination* teams had begun to work more like a *treatment team*. In *treatment teams* staff are often nurses representing psychiatric care and social workers with knowledge of substance abuse and social services. Further, the team has access to a psychiatrist, part-time or for certain hours.

In the *co-operation teams* there are co-ordinators for each client/patient, who like a case-manager co-ordinates different kinds of services. The case-manager function is currently under development in Sweden. They mainly belong to social services with financial support from the government. However, case-managers mostly have patients with severe mental illness and those with a concomitant substance abuse seldom get their own case manager. So far, case-managers for psychiatric patients with comorbid substance abuse often belong to special teams for these patients.

From the 5-year follow-up we cannot say which of the two integration models is preferable - both worked well.

Co-operation – organisational level

At the 18-month follow-up financial agreements had been settled in four projects between social services and psychiatric services to share staff and other costs for these patients. It was possible to compare these four projects quasi-experimentally with four projects without financial agreements at that time. The patients belonging to projects with financial agreements differed from the others at baseline evaluation – they were more likely to have a dependency on illicit drugs, a psychosis and a higher severity rating for psychic health and legal problems (ASI). At 18 months follow-up there were no outcome differences between the two groups except that patients in projects with a financial agreement were assessed as having a higher quality of life. At 5-years follow-up patients from projects with financial agreement had improved more than patients in the other projects as concerns psychic problems (ASI), psychological symptoms (SCL-GSI) and a better quality of life. There were no differences in improvement in respect of substance abuse.

After five years the staff stressed that financial agreements are of great importance in facilitating co-operation between psychiatric services and the local authority. Such agreements give stability to the development of the

services around these patients. At that time another three projects planned to coordinate their services based on such agreements.

From 2003 a new law in Sweden has facilitated making decisions and planning between social and health care services.

Furthermore, staff stressed the importance of education in both substance use disorders and mental disorders and the integration of services. Different educational programmes have been arranged in Sweden, for example initiated by addiction centres.

Problems identified as concerns treatment of comorbid substance abusers

The following problems were stressed: housing, somatic illness, unemployment, financial problems (about two-thirds have a disability pension or are on long-term sick-leave). In addition, many patients have problems in occupying themselves each day. Screening for alcohol and drugs problems in patients in psychiatric services is seldom performed. Currently a screening study including an intervention study is being conducted by the author.

Swedish Network for Dual Diagnoses

During the project period meetings had been arranged between the projects. When the project period ended several projects wanted to continue their contact, and also to get in contact with others who work specifically with patients with dual diagnoses. Therefore a Swedish network was established in 2002. It now has 30 members, about half representing municipalities and half health care services. Its aims are to give support to each other and to follow national and international research, to collect positive and negative experiences and to influence those who make central decisions. They have also arranged conferences and co-operate with similar networks in the other Nordic countries. The next conference will take place in 2005, with the theme 'Treatment models'. The network has got some support from the Swedish Board for Health and Welfare.

Members from the network report that difficulties are still identified on how to co-ordinate services for these patients, especially there is a need for support from psychiatric health services. Differences persist in views concerning dual diagnoses.

Staff representing compulsory treatment for substance abuse find that many of their clients have psychiatric disorders as well, and they have identified problems in arranging services after compulsory treatment.

Present situation on use of alcohol and drugs in Sweden

The use of alcohol as well as misuse of drugs has increased in Sweden. The per capita annual consumption of alcohol has increased by around 25% during the last decade. The Swedish State Retail Alcohol Monopoly has been legally challenged by the European Union because it believes that the monopoly breaches the rules of the Single Market.

During the last year alcohol prices in several of our neighbouring countries (Denmark, Finland and Germany) have been fallen due to reductions on taxes on alcohol. Further, the prices are still lower in the new EU countries around the Baltic Sea. You can bring in to Sweden as much alcohol as you want for personal use, which means that people are buying less from the Swedish Retailing Monopoly. Health consequences as well as reports on other problems due to alcohol in families and outside the home are followed carefully, especially in the regions near other countries with cheaper alcohol, such as southern Sweden.

There is an ongoing work on Swedish guidelines for treatment of alcohol and drugs. A large review on current knowledge has been performed by The Swedish Council on Technology Assessment in Health Care (SBU), published in Swedish 2001 and in English 2003 (Berglund *et al.*, 2003 a, b). This review along with other international reviews is used in the guidelines. Special attention is given to patients with concomitant substance abuse and mental disorders.

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Chapter 18 The UK experience

(A) Comorbidity in England and Wales

B Boland, S Galea and M Abou-Saleh

Summary

This chapter looks briefly at the extent of comorbidity in the United Kingdom (UK) and its impact on society. Three main types of treatment models are identified: Consecutive treatment of both disorders; concurrent but separate treatment of both disorders; and concurrent treatment of both disorders by the same staff. The ways in which these models are actually applied in the real world are examined by reference to four treatment services. These examples demonstrate that service history and evolution can result in different service models in different regions. Services have not been constructed in isolation, but rather develop out of existing addiction and mental health services. The structure and process of services provided is determined locally, depending on local need and catering for diverse populations. Many services draw on a broad range of professionals to give a varied skills mix to give optimal care to the users which they serve and use different aspects of the 'serial', 'parallel' and 'integrated' treatment models for comorbidity.

Mental health services in the United Kingdom - the extent of dual diagnosis

Comorbid substance misuse and mental illness (dual diagnosis) is a common condition associated with increased morbidity. Research conducted on UK samples report prevalence rates of dual diagnosis similar to those in other European countries and in the US.

Studies involving patients in contact with mental health services in the UK report a prevalence ranging between 33% and 62%. Menezes *et al* (1996) found a one year prevalence rate of substance misuse in 36% of patients with psychosis in contact with Community Mental Health Teams (CMHTs) in London. Another study (Wright *et al.*, 2000), looking at a sample of patients with functional psychosis, in a suburban area of South London, found a 33% prevalence rate of dual diagnosis. Similar rates (37%) were also found in first-episode psychotic patients in Nottingham (Cantwell *et al.*, 1999). The COSMIC project (Weaver *et al.*, 2002) studied samples of patients in contact with mental health services in London as well as outside London. An overall prevalence rate of 44% was found for problematic drug use and / or hazardous or harmful alcohol use. Rates for problematic drug use and drug dependence were significantly higher within the London samples (43.9%), with significantly higher use of cannabis, sedatives and crack cocaine, when compared to rates in regional areas outside London (22%). Other studies reported higher prevalence rates when studying more vulnerable samples, such as mentally disordered offenders (62%) (Wheatley, 1998).

Dual diagnosis among patients in contact with drug and alcohol services is also very common. The COSMIC project (Weaver *et al.*, 2002) found that 74.5% of those in contact with drug services and 85.5% of those in contact with alcohol services experienced mental health problems. The majority suffered from depression and/or anxiety disorder (67.6% of the drug treatment population and 80.6% of the alcohol treatment population with mental health problems), followed by personality disorders in both samples (37% and 53.2% respectively) and psychotic disorders (7.9% and 19.4% respectively). There were no significant differences in prevalence rates between the London and the non-London samples.

The impact of dual diagnosis

Dual diagnosis is commonly associated with increased morbidity and mortality. UK studies identified that patients with co-morbid psychiatric illness and substance misuse are about twice more likely to utilise inpatient facilities, than those with psychiatric disorders alone (Bartels *et al.*, 1993; Menezes *et al.*, 1996; Wright *et al.*, 2000). They tend to be less compliant with treatment with more frequent relapse rates and increased treatment costs (Bartels *et al.*, 1993; Lehman and Dixon, 1995; Ley *et al.*, 2001). They also show increased rates of suicidality (McCloud *et al.*, 2004) and violence and have been identified as a vulnerable group in the National Confidential Inquiry into Suicides and Homicides (Appleby *et al.*, 2001). Other associated complications identified as being more frequent among such patients are, problems with housing (Drake *et al.*, 1989; Wright *et al.*, 2000) and criminal behaviour (Lehman and Dixon, 1995; Ley *et al.*, 2001). Overall, the costs for UK patients with dual diagnosis are significantly high. Abou-Saleh and Janca (2004) suggest that, diminishing mental health budgets and facilities and increased reliance on out-patient facilities within Europe, are likely to be contributing to such increased health care and social costs with dual diagnosis patients.

Service provision models

Service provision for dual diagnosis in the UK is not satisfactory (APPDMG, 2000). Limited provision has frequently been reported (Mental Health Act Commission, 1997; 1999). Despite the findings of a survey on mental health nurses by the Royal College of Nursing, that 68% of mental health nurses knew of illicit drug use on the psychiatric unit where they worked (Sandford, 1995), staff training on substance misuse and its effects on mental illness remains unsatisfactory (NHS Health Advisory Service, 1996; Weaver *et al.*, 1999). Reviews on service delivery for dual diagnosis outlined three main treatment models:

- Serial: consecutive treatment of both disorders.
- Parallel: concurrent but separate, treatment of both disorders.
- Integrated: concurrent treatment of both disorders by the same staff.

Arguments have been presented in support of the 'integrated' model (Ries, 1993; Drake *et al.*, 1993) and some suggest that this emerged as a result of failure of the 'serial' and 'parallel' models (Lowe and Abou-Saleh, 2004). However, a systematic review on six USA studies (Ley *et al.*, 2001) did not identify one model as being more effective than the others. The application of such findings to UK services needs to be made with caution. UK-based studies are too sparse to inform which model would be most effective (Weaver *et al.*, 1999; Marshall *et al.*, 2000). The 'integrated' model is not believed to fit well within the organisational structures of the UK national health and social services (Lowe and Abou-Saleh, 2004). Substance misuse services in the UK, although part of the mental health system, still tend to run relatively separately to mainstream psychiatric services (Gournay *et al.*, 1996; Johnson, 1997). The culture within mainstream psychiatric services is also fundamentally different to that in substance misuse services, making communication and integration difficult.

Applying models of service provision in the United Kingdom

Within the UK, recommendations were made in relation to the high prevalence rates of comorbidity (Weaver *et al.*, 2002). It was recommended that both substance misuse services and mainstream psychiatric services should be competent to recognise and meet the needs of patients with co-morbid conditions. Both services should also work more collaboratively. However, UK standards did not support one particular treatment model, with suggestions that decision on what model to adopt, should be made at a local level (Abdulrahim, 2001). In view of this, a large number of services have adopted a combination of different elements of the 'serial', 'parallel' and 'integrated' treatment models, depending on identified local need.

Examples of model applications

The next section discusses service descriptions of four treatment services for dual diagnosis in the UK. As already mentioned, across the UK there is marked diversity in service provision for individuals with co-morbidity. Services are set up by local health providers, driven by unique pressures and needs in the local population, reflecting different interpretations of model application. The four treatment services described below were selected in an attempt to provide a representative cross-section. These are presented as illustrations of developments made by local healthcare providers and in no way indicate that these are the only models adapted in the UK. Many more services throughout the U.K. will bear similarities and differences to these examples. Two inner city (one Inner London and one in Birmingham) services, one suburban and one within a more rural location were selected, giving descriptions of models for varying socio-economic populations. The choice was also based on attempting to describe models that came to some proximity towards following the 'serial', 'parallel' and 'integrated' treatment models but with modifications related to local need.

*Inner City London - The Lewisham Dual Diagnosis Project*History

The Lewisham dual diagnosis services were set up in response to the Department of Health's policy implementation guide for mental health (DH, 2002). Further information on the Lewisham Project can be found at: <http://www.londondevelopmentcentre.org/resource/local/docs2/Lewisham.pdf>

Staffing

Functions with eight team members. Each team member is located within a specific mental health service, with the manager based in the drug and alcohol service. These posts are generic, for professionals with substance misuse experience. Presently, the majority are of a nursing background, with an addition of one social worker and one occupational therapist. There is also input from a Nurse Consultant in Dual Diagnosis.

Main treatment settings

Multidisciplinary Substance Misuse Team, Forensic Community team, Non-statutory agencies, Mental Health Services i.e. CMHTs, assertive outreach and inpatients.

Programme variables

Involvement of either the:

- (i) Substance misuse team only;
- (ii) Substance misuse team for a recognised period, referring back to the mental health team;
- (iii) Mental health team and substance misuse team working jointly; or,
- (iv) The mental health team managing both the substance misuse and mental health problems.

Average time in treatment

Aim for maximum 12-week period.

Average frequency of attendance

Targeted assertive follow-up. Approaching 100% engagement.

Allocation of key-worker

A key-worker is not allocated by the dual diagnosis team. However, there is usually allocation of a key worker from the primary care team.

Structure

Each member of the team works within a designated mainstream mental health facility - either CMHT, assertive outreach team, or in-patient team. In parallel, the practitioners operate as a 'Virtual Team' managed overall by the Team Manager situated in the Drug and Alcohol Team.

Process

One of the main values of the project is to adopt a client-centred approach. Clients are managed exclusively within substance misuse or mental health services, where appropriate. There is an encouraging close liaison between substance misuse and mental health services. Referrals to the 'Dual Diagnosis Service' are reviewed by the worker receiving the referral. There are three main outcomes for each referral: advice to the referral source, joint working with the clients care co-ordinator or prescription of a brief intervention of between 4 and 10 sessions.

Referrals are generally received from the settings for which the services are targeted - i.e. via CMHTs and Community Substance Misuse Teams (CSMTs). The maximum duration aimed for between referral and assessment is 10 days. The primary requirements for access to the service are fairly flexible. However, individuals need to be residing within the local catchment area to be eligible for input, and significant input will only be provided if the individual is managed under an enhanced Care Programme Approach method. The service caters for individuals between 18 and 65 years of age. The maximal length of treatment with the service is 12 weeks.

Content

As mentioned earlier there are three main outcome possibilities:

- (i) Advice offered to the referrer: ranging from increasing the awareness of the referrer on the various services available, to direct advice on issues relating to individual care management.
- (ii) Period of joint working: Direct support to the care co-ordinator is provided, through training, supervision, and shared assessment. The project workers also offer a 5-day training course to the caring team (pan-London training).
- (iii) Brief intervention: A project worker will directly work with an individual, using a range of techniques including motivational interviewing and relapse prevention for a maximum period of 12 weeks. If a longer period of work is required, the individual is referred on to the substance misuse team, and the continuity of shared care is encouraged.

Inner City Birmingham - The COMPASS Programme

History

The COMPASS Programme began developing in 1998. It represents an 'integrated shared care' approach to meet the unmet needs of those with severe mental health problems who use alcohol and drugs problematically

within Northern Birmingham Mental Health NHS Trust. Further information is available at:

<http://www.bsmht.nhs.uk/patient&carer/patient&carer2/COMPASS.htm>.

Staffing

The team consists of six professionals - a Team Manager (Nurse), a Clinical Nurse Specialist, a Community Psychiatric Nurse, a Clinical Psychologist, an Occupational Therapist, and a Research Psychologist.

Main treatment settings

Assertive Outreach Teams, Early Intervention Services and Homeless Service. The COMPASS Programme also provides brief interventions to mental health and substance misuse services. A group programme is offered to acute inpatient units and the addictive behaviour centre in-patient unit.

Programme variables

Interventions follow the Cognitive-Behavioural Integrated Treatment (C-BIT) Model. Three main interventions are offered:

(i) Intensive Input to Assertive Outreach Teams, Early Intervention Services and Home Treatment Services. No time-frame for input is applied; however, a long-term input is encouraged;

(ii) Consultation Liaison Service to mental health and substance misuse services. This is based on a six-session motivational enhancement intervention carried out over a 12-week period;

(iii) Group sessions on In-patient units or at Community Drug Teams.

These interventions are carried out jointly with the clients' existing key worker or drugs worker. COMPASS staff do not take on the role of a key-worker.

Structure and process

Referrals from mental health and substance misuse services are discussed at the consultation and liaison service. Clients are assessed within a 2-week period. Individuals must be aged between 16 and 65, and have a diagnosis of a severe and enduring mental health problem and problematic substance misuse in order to be eligible for services. A brief intervention is delivered, followed by a complete treatment plan agreed between the client, key worker and the COMPASS team.

Content

All staff within the Assertive Outreach, Early Intervention and the Homeless services are provided with seven half-day training sessions regarding C-BIT interventions. A manual is also provided. The teams will then receive further input from the COMPASS programme clinicians, in the form of one day per week, to facilitate the application of C-BIT interventions which are intended to be integrated within ongoing team work.

The consultation liaison service consists of six sessions, two to four sessions focusing on assessment, motivational enhancement, and the other two sessions as follow-up.

Informal group sessions are also offered to individuals to raise issues regarding mental health and substance misuse problems. The COMPASS workers may also provide a single assessment, or provide information to the managing teams, depending on presentation.

Urban/Suburban Location: Kingston, Surrey, Community Drug and Alcohol Team Dual Diagnosis Service

History

The Kingston Community Drug and Alcohol Service (CDAT) launched their dual diagnosis model of joint working with mental health services in 1998. It represents a local attempt to respond to the growing gap between substance misuse services and mental health services. Further information can be accessed at:

http://www.alcoholconcern.org.uk/files/20030811_172113_kingston20CDAT.pdf.

Staffing

'Link' staff from CDAT identified for local services.

Main treatment settings

In-patients and out-patients from the rehabilitation service, assertive outreach team and CMHTs.

Programme Variables

CDAT is proactive in reaching out to clients in partnership with mental health. It has moved away from a traditional 'no motivation - no service' model. There is a four-stage approach:

- (i) Assessment, including risk assessment;
- (ii) Education;
- (iii) Harm reduction; and
- (iv) Abstinence and relapse prevention.

Structure and Process

The main tasks for the link person to services are:

- (i) To respond to all requests for joint assessments of dual diagnosis clients.
- (ii) To attend all allocation meetings, identify cases requiring joint assessment, advise mental health services on treatment strategies, feedback on jointly-worked cases and discuss CDAT cases requiring mental health support.
- (iii) To attend other relevant meetings such as CPA meetings.

Content

The service aims to provide a set of interventions from mental health and substance misuse services concurrently in a flexible but co-ordinated way in the spirit of joint working to engage, stabilize and treat people with dual diagnosis.

Semi-rural location - The West Sussex Dual Diagnosis Service

Substance misuse services in West Sussex work alongside mainstream mental health services. The following provides the structure and process of such service provision:

Staffing

Two professionals, with a nursing background, are specifically dedicated to offer a dual diagnosis service. One professional is based in an Assertive Outreach Team and the other in a CMHT. However, all workers within the mental health services and the CSMTs are expected to have knowledge of the care pathways and to play a role in the care of individuals with dual diagnosis.

Main treatment settings

In-patient acute admissions, CMHTs, substance misuse services.

Programme variables

- (i) Care is provided by CMHTs with informal advice and support provided by triage co-ordinators or other staff from the CSMT;
- (ii) Referral to non-statutory Tier 2 agency. Shared care may also be advised;
- (iii) Referral to substance misuse primary care liaison nurse. Shared care may also be advised;
- (iv) Shared care between CMHTs and CSMTs;
- (v) Care provided solely by the CSMTs.

Structure

Dual diagnosis work is undertaken by personnel from both CMHTs and CSMTs. Clients will be allocated a key-worker from the CSMT whether the 'shared care approach' and / or the 'solely CMHT approach' is employed. Management will be provided using the 'Care Programme Approach'. If 'Care Programme Approach' care co-ordination is required, the key-worker for this remains in the CMHTs. With CSMT involvement only, the *Models of Care* (National Treatment Agency and Department of Health, 2002) approach will be followed for management.

Process

This is largely based on effective liaison between CSMTs and CMHTs. A *Dual Diagnosis Care Pathway / Flow Chart* guides appropriate allocation of intervention and service provision. Referrals are generally received from the settings within which the dual diagnosis services are offered - i.e. mainly via CMHTs and CSMTs. Substance misuse teams aim for a target of 10 days between referral and assessment. Mainstream mental health services have a wider target determined by varied indicators including clinical risk or nationally produced targets. It is a requirement that all service users eligible for the service, reside within the local catchment area. Eligible service users may have a co-morbid mental disorder ranging from acute to chronic disorders and psychotic to non-psychotic disorders. At present, the age range is determined by the team providing the primary care - i.e. 18-65 years for CMHTs and 19-65 years for CSMTs. Discharge time is not strictly defined, but would occur when it is no longer felt necessary to receive care from both teams.

Content

Interventions offered may be various and do not follow a specific model – mainly depending on individual needs. Individual management plans are guided by the expertise available within the managing teams. There are a number of specialist mental health teams within the local area including rehabilitation, forensic, crisis and early intervention services. The individual would not be excluded from these services if required.

Conclusions

The discussions above illustrate four examples of service models for dual diagnosis provision in the UK. Services have developed in response to needs of individuals with dual diagnosis. The selection of services presented here show how service history and evolution can result in different service models in different regions. Services have not been constructed in isolation, but rather grown from existing addiction and mental health services.

The structure and process of services provided is determined locally, depending on local need and catering for diverse populations. In bids for efficiency, services have generally opted to run in a flexible and adaptable manner. Local pressures and budget limitations encourage innovative uses of resources. Many services draw on a broad range of professionals to give a varied skills mix to give optimal care to the users which they serve and use different aspects of the 'serial', 'parallel' and 'integrated' treatment models for comorbidity.

The scarcity of prevalence studies and exploration of effectiveness of service provision for dual diagnosis patients in the UK, calls for further examination of practice, clinical audit and service research, to inform further refinement of practice-based developments.

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(B) Comorbidity issues in Scotland

C Lind

Summary

For the last five years matters to do with Scotland's health and social care (including criminal justice issues) have been devolved to the Scottish Parliament. Parliamentary deliberations are then given strategic and operational form by the Scottish Executive. Previously existing advisory committees for alcohol misuse and drug misuse have become answerable to the Ministers for Health and Criminal Justice respectively. In the course of producing their respective national strategies for alcohol and drug misuse it became clear to both committees that the needs of those with co-occurring mental health and substance misuse problems were not being met. A jointly commissioned report (*Mind the Gaps*) was published as a guide for both practitioners and service commissioners. The impact of this is still hard to judge but at the time of writing services for this group remain patchy and underdeveloped in most areas of Scotland.

Introduction

There has always been a degree of difference in the structure and strategic directions of health services north and south of the River Tweed, which forms part of the border between Scotland and England. However, since the Scottish Parliament was established in 1998 and given full responsibility for Scottish health and social strategy, the direction of travel has diverged from its English counterpart in some unexpected and dramatic ways. Scotland's population is notoriously unhealthy and has some of the highest levels of, for instance, cancer, cardiovascular disease, depression, suicide and substance misuse in Europe (Scottish Executive, 2000a). This, as well as the more far-flung nature of the population has prompted the development of a service that is now that of a different country when compared to England. The recent abolition of Primary Care and General Hospital trusts in favour of Health Board led unified services and the development of Community Health Partnerships (between primary care organisations and Local Authorities), the continuing rumours of hugely reduced numbers of Health Boards, the drive to unify health and social care especially at the level of primary and community care are examples of what have become profound differences in the delivery of health care when comparing Scotland and England. It is perhaps no surprise then that the Scottish Executive's guidance document "*Mind the Gaps*" (SACDM & SACAP, 2003) comes to a different conclusion as to service structure than similar English guidance (Appleby *et al.*, 2001) with its recent emphasis being put on absorbing responses to comorbidity within mainstream mental health and addiction services.

Traditionally, the sub-specialism of addictions in Scotland has rested firmly with psychiatrists and it is only in the last 15 years that it has acquired the degree of credibility within the psychiatric establishment that it currently has.

Addiction psychiatrists of a certain age are fully familiar with the bemusement and incredulity from colleagues in other areas of psychiatry that accompanied any request for recognition let alone resources!

Perhaps this helps to explain why the notion of comorbid disease in Scottish psychiatry is, in any systematic sense, relatively recent when compared with other medical specialties, although the lack of readily identifiable organic pathology probably plays some part too. Forensic psychiatry and child and adolescent psychiatry, for different reasons, are the exception and have long been aware of the impact of multiple pathologies. General adult psychiatrists, whilst recognising the impact of, in particular, the co-existence of mental health and substance misuse issues, have been relatively resistant to systematising a coherent and unified response to such matters. Addiction psychiatry, although for many years aware of the complexities of relationships between matters relating to substance misuse and mental illness has often struggled to formulate appropriate responses in the absence of clearly defined support from general adult services.

Nonetheless, the nature of comorbid mental health and addiction matters has come to the fore in the last 15 years both nationally and internationally as mental health services have become increasingly aware of the need to respond appropriately to addiction issues, and addiction services have become more aware of the need to deal appropriately with mental health issues if desirable outcomes are to be realised. A variety of systems has sprung up, largely as a response to local health system-specific drivers, with varying degrees of integration of services but all with the explicit aim of attempting to deal constructively with both matters. The nature of such services has inevitably reflected the health context in which they exist and local drivers have so far been the key to development.

Prior to the establishment of the Scottish Parliament, the Scottish Advisory Committee on Drug Misuse (now the Scottish Ministerial Advisory Committee on Drug Misuse) had been meeting for four years. This group was responsible for producing *“Tackling Drugs in Scotland: Action in Partnership”* (Scottish Office, 1999), which will be looked at in more detail later. In 1997 the Scottish Advisory Committee on Alcohol Misuse (now the Scottish Ministerial Advisory Committee on Alcohol Problems) was constituted and in 2002 produced the *“Plan for Action on Alcohol Problems”* (Scottish Executive, 2002a).

In the course of producing these two strategies it became clear that the services being offered to the most complex end of these client groups, i.e. those with significant mental health problems were being met, at best, patchily and, at worst, not at all. In 2001 the first joint meeting of the advisory groups met to discuss the matter and the following year the subsequently established working party produced *“Mind the Gaps – meeting the needs of people with co-occurring substance misuse and mental health problems”* (SMACAP & SMACDM, 2003)

Although originally conceived of as a guide for service commissioners it has become the definitive guide to Scottish strategic direction in the matter. The

foreword signed by the then Ministers for Justice and Health (an indication in itself of the differing approaches to drug and alcohol policies respectively) indicates their full support of the contents and full acceptance of the recommendations contained therein. Indeed, a number of the recommendations have now been put forward for inclusion in more generic health strategies at the Scottish Executive level.

The Scottish context – mental health and addiction drivers

Mental health

The three main drivers for the development of mental health services in Scotland have been “*A Framework for Mental Health Services in Scotland*” (Scottish Office, 1997), “*Our National Health*” (Scottish Executive, 2000a) and “*Partnership for care*” (Scottish Executive, 2003a). The last two describe the aspirational development of the overall Health Service, majoring on the principle of joint and well communicated working patterns, whilst the first gives a national template for the development of local mental health services. Taken together, they set out a number of policies and initiatives which have improved the planning, delivery, quality and accountability of mental health services and which require partnership working across all involved statutory and non-statutory agencies. This includes the development of care networks based around services which are jointly managed by Health Boards and Local Authorities and which recognises the fundamental role of Primary Care in ensuring as seamless an experience of care as possible.

The 5 main principles of this National Programme include:

- The raising of awareness of mental health issues.
- The promotion of positive mental health and well being.
- The promotion of effective prevention of mental health problems.
- The inception of early identification of and effective interventions in mental health problems.
- The support of effective recovery from mental ill health

Since 2000 each Health Board area has been visited twice by the Scottish Executive sponsored Mental Health and Well Being support group and the degree of success in attaining the objectives set out in the Framework has been measured. The results then form a significant part of the yearly Scottish Executive appraisal of Health Board progress. Many areas have used this process as a way of highlighting and resolving deficiencies in local services.

To support this process there has been a strong impetus to improve the quality and relevance of information by all involved parties. This has included:

- The “Improving Mental Health Information Programme” which aims to work with all partners across organisational boundaries to agree data sets and processes to improve care management and outcome information (Scottish Executive, 2003b, 2005b).

- National Health Service (NHS) Quality Improvement Scotland which has assessed a wide variety of NHS quality standards in relation both to specific clinical events (including schizophrenia) and to local systems of care. Again Health Boards are judged on their ability to meet these standards at their yearly appraisal. The process of developing an assessment standard for schizophrenia has been one of the most significant drivers of systemic change and organisation for those with enduring mental health problems.
- Mental Health and Well Being reports.
- The Mental Health Services Improvement Network which acts as an umbrella organisation for national bodies with broadly similar aims.

Finally, the Mental Health (Care and Treatment), (Scotland) Act 2004, due to take full effect (after a staged introduction) in October 2005, has had a profound effect on the way in which severe mental illness and the appropriate interventions are conceptualised. The Act, in stark contrast to its English equivalent – the Draft Mental Health Bill 2004 (DH, 2004) - which seems to be largely a response to public anxieties about the dangerousness of mental ill health, puts the service users well being firmly at the centre of the process of care. The main principles of the Scottish Act are as follows:

- Non-discrimination – the retention of normal rights and entitlements of those with mental health problems.
- Equality – all powers under the Act should be exercised without discrimination as to age, gender or racial or social origin.
- Respect for diversity – care should be received in a manner that takes into account the recipient's individual qualities, abilities and social and ethnic background.
- Reciprocity – where society imposes an obligation on an individual to comply with a programme of treatment or care it should impose a parallel obligation on the health and social care authorities to provide safe and appropriate services including on-going care following discharges from compulsion.
- Informal care – wherever possible care, treatment and support should be provided to people with a mental disorder without the use of compulsory powers.
- Participation – service users should be fully involved as far as they are able to be in all aspects of their care and treatment. Their past and present wishes should be taken into account and they should be provided with all the information and support to enable them to participate fully.
- Respect for carers – those who provide care to service users on an informal basis should be respected for their role and experience, receive appropriate information and advice, and have their needs and views taken into account.
- Least restrictive alternative – service users should be provided with any necessary care treatment and support in the least invasive and restrictive manner possible.
- Benefit – any intervention under the Act should be likely to introduce for the service user a benefit that cannot reasonably be achieved in any other manner.

- Child Welfare – the welfare of a child with mental disorder should be paramount in any interventions imposed on the child under the Act.
- In addition, in practical terms those who may be subject to detention have a right to independent advocacy and to appoint a named person who may act on behalf of the person. Patients have the right to make an ‘advance statement’ regarding how they would wish to be treated or not treated and Local Authorities are required to undertake an assessment of need. Finally the definition of mental illness is such that it includes personality disorders as well as learning disabilities although simple intoxication with alcohol or drugs is not included.

It is likely that this will prove to be an extremely influential piece of legislation both in terms of changing practice and in setting the tenor of mental health practice for the foreseeable future. However a nationwide needs assessment has thrown considerable doubt upon the capacity of current mental health services to meet these exacting requirements.

Alcohol

The “*Plan for Action on Alcohol Problems*” which was published in January 2002 sets out a broad range of measures to begin to tackle and reduce alcohol-related harm in Scotland (Scottish Executive, 2002a). This set out 4 main areas for action:

- Culture change which has taken the form of a series of well evaluated advertising campaigns to change people’s attitudes to alcohol.
- Prevention and education.
- Service provision which has seen the identification of nearly £10 million (€14 million) nationwide to be spent on the provision of new alcohol services on the last two years.
- Protection and controls which have resulted in the production of a new licensing bill (SPCB, 2005).

The “*Framework for Alcohol Problems support and treatment services*” (Scottish Executive, 2002b) and strongly linked with the action plan, outlines the way in which local services will be expected to develop.

From these two documents local Alcohol Action teams or more commonly now Drug and Alcohol Action Teams, have been required to draw up three-year local strategies on how they plan to meet identified support and treatment within their area. These include the action required to support those with co-existing mental health and alcohol problems. Local teams will be held accountable for the development of this service provision and are required to report yearly to the Scottish Executive. In the last two years £10 million (€14 million) has been allocated nationally for service development in line with the Framework.

Drug misuse

The national strategy "*Tackling Drugs in Scotland: Action in Partnership*" (Scottish Executive, 1999) was closely followed by "*Drug Action Plan Protecting Our Future*" (Scottish Executive, 2000b). These leave the responsibility for ensuring adequate service provision and co-ordination to local Drug Action Teams comprising officer level constituency from all partner organisations with responsibility for drug services. Increasingly these teams are seen as a way of ensuring co-operative management and development of drug services although in most areas this particular road remains largely untravelling. The Department of Health in London published "*Drug Misuse and Dependence: Guidelines on clinical management*" in 1999 (DH, 1999). Insofar as it went, this was held to apply to all practitioners in the United Kingdom. It was later superseded in Scotland by "*Integrated Care for Drug Users: Principles and Practice*" (EIU, 2002).

This extremely useful document sets out the evidence base for integrated care and suggests a framework for the development of the key components of integrated care including assessment, information sharing and the planning and delivery of appropriately sequenced care. It supports the planning of complex care systems for a client group with multiple and often extreme needs. The way in which this affects local services is determined and taken forward by the Drug Action Team. The key essentials within this process are service accessibility, adequate and meaningful assessment (based on the principles of single shared assessment), the planning and delivery of properly coordinated care, information sharing and the monitoring and evaluation of both those individuals in receipt of care and those systems providing it.

Others

The Joint Future agenda attempts to promote a system of integrated working between all partner agencies, particularly through a system of joint resourcing and joint management which is accessed through a 'single shared assessment' and which promotes the joining up of otherwise disparate services. This has been harder to operationalise than originally thought and the date set for full implementation across community services has been repeatedly put back. Some areas such as Glasgow are far further down this road than others despite the apparent logic of using such a system to underpin addiction services.

The health of homeless people (disproportionately represented in both the addiction and mental health arenas) is examined in the document "*Health and Homelessness guidance*" (Scottish Executive, 2001) and a framework laid out for the development of such services. This lays responsibility for the development of 'Health and Homelessness Action Plans' at the door of Health Boards based on local needs assessments. Again, local responses in terms of the production of coherent services for this group has been patchy indeed.

In 2002 the Scottish Executive Homelessness Task Force in recommendation 46 of its report to the Scottish Parliament said “NHS Boards should address the provision of Mental Health Services to homeless people to minimise the barriers to access. Being free from substance misuse should not be an automatic precondition to access to services” (Homelessness Task Force, 2002). This was subsequently endorsed by the Scottish Parliament.

Nature and extent of the comorbidity problem in Scotland

Almost inevitably, the evidence to support the production of service recommendations for as complex and under-recognised group as those with comorbid mental health and addiction problems is drawn from a wide variety of sources. The most comprehensive review of such as it relates to Scotland is contained in the “*Mind the Gaps*” document (SACAP & SACDM, 2003) and is derived from routinely collected datasets, general population surveys and research studies (ISD, 2002). Scottish data were supplemented by information from other parts of the United Kingdom and, indeed, from around the world although where possible such non-Scottish information was limited to attempting to demonstrate the complexity and seriousness of such problems. Existing evidence as to the scale and nature of the problem falls into four broad categories:

- Information as to the prevalence of mental health problems, drug and alcohol use in Scotland.
- Information gathered from those whose primary problem was substance misuse.
- Information gathered from those with mental illness as the primary problem.
- Information from the general population as to co-existing mental health and substance misuse problems.

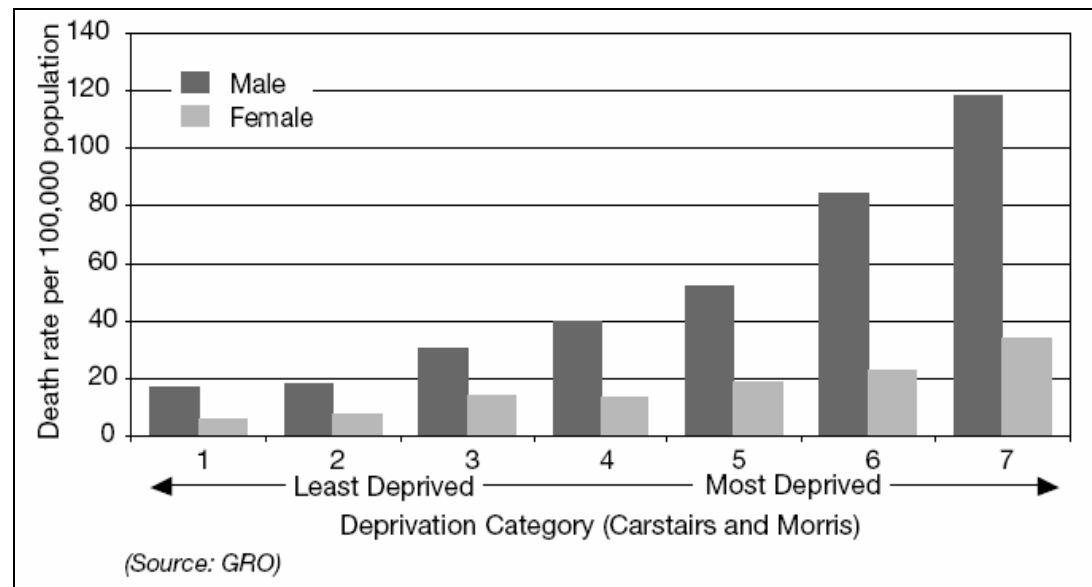
Prevalence of alcohol problems in Scotland

Alcohol problems, if defined as hazardous and harmful levels of alcohol consumption and their related consequences, have been identified by the Scottish Parliament as one of its major concerns. Scotland drinks significantly more alcohol than most of the rest of Europe (Scottish Executive, 2002a). In general, men will be more likely than women to develop problems and younger age groups are more likely to drink to excess, especially in the form of binge drinking. The Scottish Health Survey of 1998 suggests that 7% of men and 3% of women are drinking at levels that are likely to precipitate serious health consequences and that 12% of men and 5% of women can be identified as ‘problem drinkers’ whilst the same survey suggested that 33% of men and 15% of women drink in excess of weekly recommended limits (Shaw *et al.*, 2000).

It appears that across the country, irrespective of age or gender, alcohol consumption is increasing especially in the 16-25 year old female age group. Surveys of Scottish schoolchildren reveal that the trends start well before the legal minimum age for drinking with 77% of 15 year olds reporting that they

have been drunk on at least one occasion (SALSUS, 2002) Although alcohol consumption is largely similar (at least in amount) across deprivation categories the mortality rates in deprivation category 7 (the most socially excluded group) are seven times those in deprivation category 1 (the most affluent) (Scottish Health Survey, 1998) suggesting that lifestyle can be protective to the most harmful sequelae.

Figure 18.1: Alcohol-related death rates by Deprivation Category and gender, Scotland, 1999



Source: Taken from page 15, Scottish Executive (2002a). Crown copyright Scottish Executive 2002. Reproduced with permission of Scottish Executive.

In the meantime, alcohol related deaths have risen from 684 in 1990 to 1980 in 2003 (SE - AIS, 2005 – see Figure 18.1) whilst 3 in every 100 acute admissions to all hospital beds and 1 in 10 of all psychiatric admissions had an alcohol-related diagnosis. The potentially important role that primary care might play in organising a service response to alcohol problems is demonstrated by the fact that in 2002/3 there were 247,000 GP consultations for alcohol-related problems (Scottish Executive, 2005).and that people with such problems consult their GP twice as often as those who do not.

The more vulnerable populations, such as the homeless, as might be expected can be shown to have extremely high levels (more than half in a survey of Glasgow's homeless population) (Kershaw *et al.*, 2000), whilst prisoners in a survey in England and Wales revealed that approximately one-third of both remanded and sentenced male prisoners and 14% of women prisoners had severe alcohol problems (Singleton *et al.*, 1999). It has been estimated that alcohol problems cost Scotland upward £1.125 billion (€1.6 billion) in 2002/3 (Scottish Executive, 2005a).

Prevalence of drug problems in Scotland

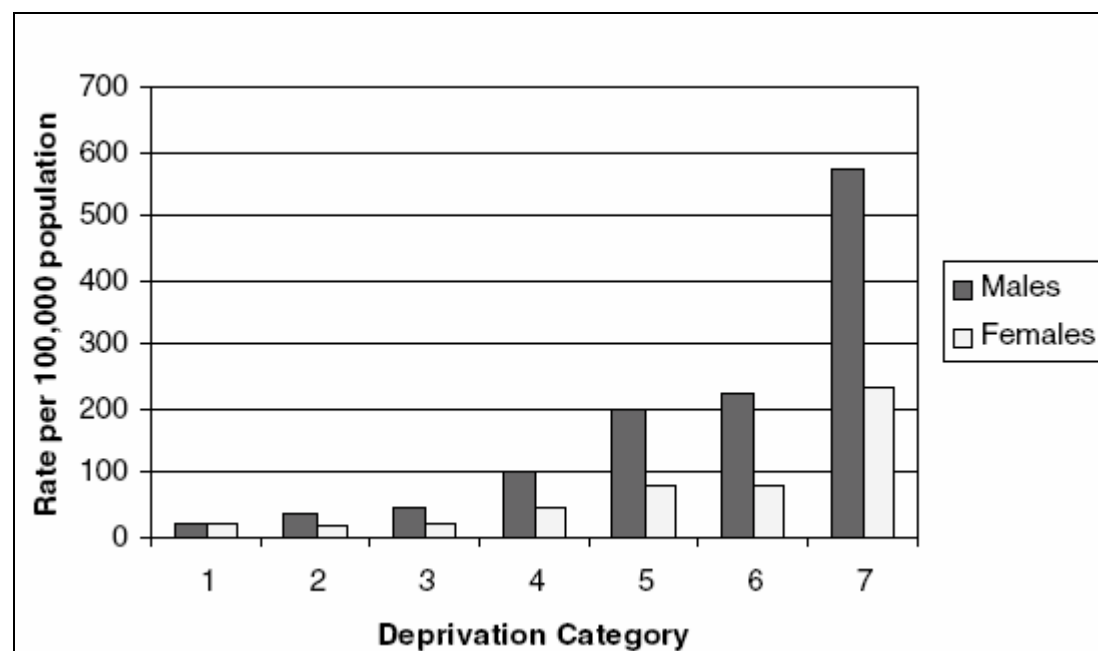
Like alcohol, the use of illicit drugs poses a major problem for Scotland with

some of the highest rates of drug use in Europe. About one in twenty adults admits drug use in the previous month (Fraser, 2001) the preponderance being males and younger age groups (37% of those between 16- 29 years). Trend analysis would suggest that the level of drug use is reducing from a peak in the mid nineties (ISD, 2002) although around most of the country drug deaths continue to rise (46% increase between 1996 and 2004 – (Jackson, 2005)). In the 13-15 year old group there was little change in drug use prevalence rates between 1998 and 2002 running at 8% and 23% respectively (SALSUS, 2002).

With regard to use of services there are proportionally many fewer recorded GP consultations for drug misuse as compared to alcohol problems, 11,470 drug consultations in 2003 (ISD, 2004). When hospital admission is looked at there are again proportionately fewer drug users entering hospital (3% of psychiatric admissions in 2002 (ISD, 2003a). Meanwhile over 12,600 individuals were reported to the Scottish Drug Misuse Database in 2003/4 as being new entries to drug treatment (ISD, 2004).

Half (50%) of prisoners report no drug use in the last month although the fact that 50% do is considerably higher than the general population (SPS, 2004) whilst 20% of those who are unemployed report use in the last month (Fraser, 2001). There does seem to be a clear relationship between deprivation and problematic drug use, GP contacts and hospital discharges use being significantly higher in more deprived areas (ISD, 2003b – see Figure 18.2).

Figure 18.2: Acute hospital in-patient discharges with a diagnosis of drugs misuse, Scotland, 2001-2



Source: Taken from page 75, SACDM & SACAP (2003). Crown copyright Scottish Executive 2002. Reproduced with permission of Scottish Executive.

Whether this represents the true rate of use or the disproportionate development of problems is open to debate. The Psychiatric Morbidity survey suggested that there was a clear association between drug dependency and lifetime experience of either bullying or violence in the home or sexual abuse (Singleton *et al.*, 2001).

Prevalence of mental health problems in Scotland

As is true in most countries, the weight of mental health problems is significantly greater than that produced by either alcohol or drug problems. Unlike the demography of substance use the preponderance of problems shifts towards women and middle age. Analysis of time trends is made more difficult than those relating to substance use with the recent and continuing strong shift of services from being hospital-based to the community. The emphasis in the Mental Health Framework on severe and enduring mental health issues and the lack of any long term community surveys further skews the nature of service provision and the resultant analyses.

The Scottish Health Survey assesses psychosocial health using the General Health Questionnaire (GHQ12). Scores of 4 or more are considered to be an indicator of possible psychiatric morbidity. Some 13% of men and 18% of women had scores above four with the highest scores been seen in middle age while in girls aged 13 – 15 8% scored over four as opposed to 5% of boys (Shaw *et al.*, 2000). The Psychiatric Morbidity survey suggested 16% of the population had a neurotic disorder with women having higher rates than men (Singleton *et al.*, 2001).

Analysis of primary care consultations suggest that 10% are related to mental health issues whilst admissions to psychiatric wards fell by 16% between 2000 and 2001 although this is likely to reflect changing service rather than changing psychiatric morbidity.

Suicide rates, on the other hand, continue to rise inexorably, 75% in 2000 being young men only a quarter of whom had been in contact with mental health services (GRO, 2001). This prompted the Scottish Executive to launch “choose life” in 2003, a campaign aimed at developing local and national initiatives to provide better responses to those at risk of suicide and those affected by suicide. It suggests a broad-based response including the eradication of poverty, tackling inequalities, improving educational opportunities and the promotion of better health, and specifically assigns priority to young men and those abusing substances (Scottish Executive, 2003c). This has now been incorporated into the *National Programme* along with “See me” (a campaign to address the stigma relating to mental ill health - <http://www.seemescotland.org/>) and “Breathing Space” (an advice line for young men with low mood - <http://www.breathingspacescotland.co.uk/>). All have now attracted very significant funding.

The Scottish Health Survey (Shaw *et al.*, 2000), the Scottish Prison Survey (SPS, 2004) and the Glasgow homelessness project (Kershaw *et al.*, 2000) suggest that being imprisoned, homeless or unemployed all increase the risk

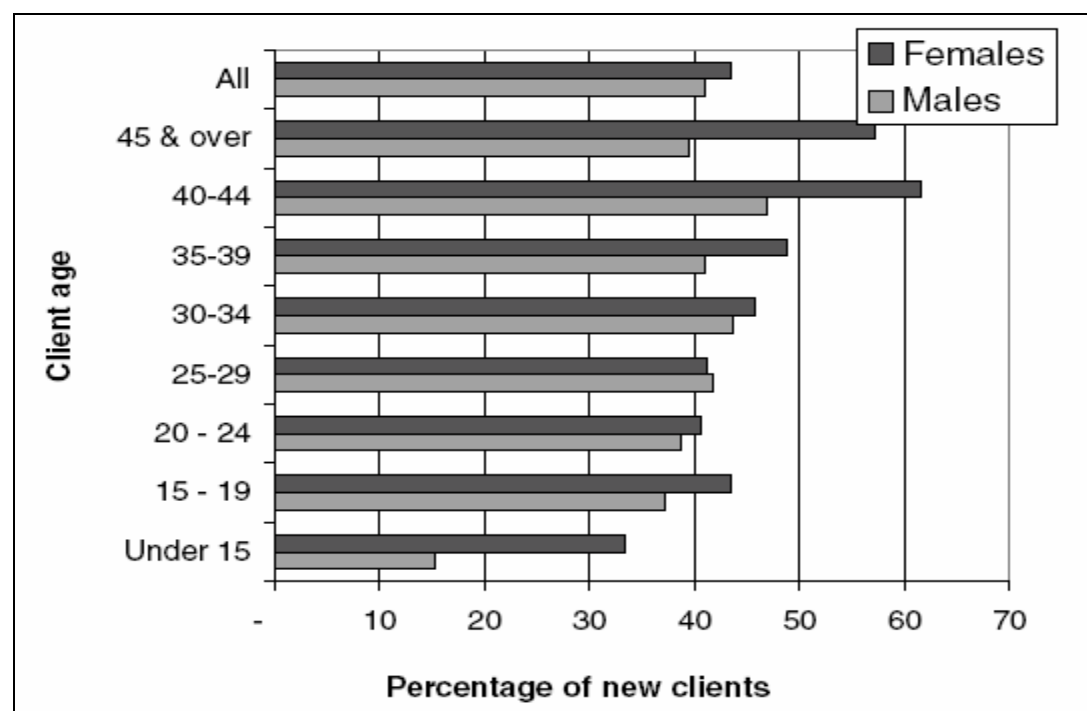
of psychiatric morbidity. Nelson's study in Edinburgh showed the impact of childhood sexual abuse on the development of both addiction and mental health problems in women (Nelson, 2001).

Prevalence of comorbid substance use problems and mental health problems

The clear perception from those who provide mental health services is that the size of that group presenting with comorbid problems is growing. A similar perception is held by those providing addiction services.

The Scottish Drug Misuse Database, set up in 1990, collects basic information about those seeking treatment for their problem either for the first time or after a period of six months absence from service. Data are contributed mainly from drug services and some GPs. One of the questions relates to an option to tick one or more of four boxes each describing a different reason for presenting. One of the boxes refers to the presence of mental health problems. This box was ticked in over 40% of cases between April 2001 and March 2002 suggesting a high proportion presenting because of their perception of having mental health problems associated with their drug use (see Figure 18.3).

Figure 18.3: Individuals attending drug treatment services with mental health problems, by age and gender, Scotland, 2001-2 (n=7,752)



Source: Taken from page 23, SACDM & SACAP (2003). Crown copyright Scottish Executive 2002. Reproduced with permission of Scottish Executive.

Inevitably, given that most of these boxes are ticked in addiction settings where there may not be access to mental health training, there must be some concern about the reliability and consistency of this information (especially

when compared to Weaver's English based figure of 75% of drug misusers having one or more mental health problems (Weaver *et al*, in press) and the Epidemiological Catchment Area Study from the USA (Regier *et al*, 1990) suggesting a figure of 64%). Nonetheless, it still represents a high prevalence rate.

There is unfortunately no equivalent database for alcohol misuse in Scotland, the Scottish Executive having rejected this proposal as part of the Alcohol Action Plan as being too difficult. By far the bulk of dedicated services for those with alcohol problems are provided by local Councils on Alcohol who do not collect information pertaining to mental health problems. The Continuous Morbidity Register, supplied with data by a representative group of GPs nationwide found that half of consultations for alcohol problems were found to relate to either mood or anxiety disorders (as opposed to one-fifth of those patients not misusing alcohol) (CMR, 2005). The ECA study suggested that 55% of those attending with alcohol problems had a concurrent mental health disorder, especially anxiety disorders. A disproportionately high number of people were also diagnosed with personality disorder especially in the drug misusing cohort (Regier *et al*, 1990). A study by Gilchrist in Glasgow of women attending a crisis centre, a drop in centre and a methadone clinic found 71% with a lifetime history of emotional abuse, 65% with physical abuse and 50% with a history of sexual abuse (Gilchrist, 2002).

The Scottish component of the 1997 Health Behaviour in School-aged Children survey from the WHO reported that 15 year olds who drank alcohol at least once a week were significantly more likely than their peers to feel low, irritable and to have sleep problems (Marmot and Wilkinson, 1999).

Analysis of psychiatric hospital discharge data shows 14% had an alcohol related diagnosis and 5% had a drug related diagnosis. The most common association with the former was depression whilst that for the latter was schizophrenia. These data will inevitably over-represent severe illness by virtue of their source and may well also significantly under-estimate the degree of substance misuse. There is unfortunately still no data collection from community services although this matter is being addressed. However, of all Scottish suicides between 1997 and 2001 over half had a history of alcohol abuse and 37% a history of substance misuse, while 20% had a primary diagnosis of alcohol dependence and 10% a primary diagnosis of drug dependence (Appleby, 2001). In 2004 9% of drug-related deaths in Scotland were adjudged to have been intentional self-poisoning (Jackson, 2005)

The most recent survey of Psychiatric Morbidity among Adults in British Households (Coulthard *et al*, 2002), a UK-wide community survey, reported that those with Obsessive-Compulsive disorder had particularly high rates of hazardous drinking, as well as dependence on both alcohol and drugs and that substances are more likely to be abused in the context of any neurotic disorder (especially true of males). The Scottish subset of this survey showed slightly higher levels of alcohol dependence and markedly higher rates of drug dependence. This survey, given its community-based nature is likely to under-

represent more severe illness. The OPCS data to do with people in institutions or who are homeless showed 10% of an institutional population had ever used drugs (7% of those with schizophrenia, 18% of those with affective disorder and 22% of those with neurotic disorders) (Farrell *et al.*, 1998). By comparison, 28% of the homeless sample and 46% of those in night shelters reported drug use. A survey in Glasgow of 200 homeless people suggested 44% had a diagnosable mental illness (most commonly anxiety states) and that 70% of 25-34 year olds were drug dependent (25% of the total sample). 54% reported hazardous alcohol consumption (more so in men) (Kershaw *et al.*, 2000)

There remain some key services who do not report to any national service database such as community mental health services, Accident and Emergency Units and the police. These deficiencies are often remedied by local enthusiasts but there is still no national imperative for these agencies to collect or share information. These services are frequently used preferentially by those with the most complex health and social problems and it seems likely that the inclusion and integration of such information would shed considerably more light on the life trajectories of those with comorbid issues.

Experience of service users

The Mental Health Foundation, supported by Turning Point Scotland, undertook consultation with people with co-existing drug and/or alcohol problems and mental health difficulties in the spring of 2003 (Mental Health Foundation, 2003, see Annex E of "Mind the Gaps").. The consultation explored their views about their problems, their experiences of services and their views about how services could be improved.

Methods

The consultation methods employed were focus groups and one to one interviews. Thirty four people were interviewed in focus groups and a further eleven people were interviewed individually. Whilst numbers consulted were small, participants had experienced a wide range of drug- and/or alcohol- and health-related services. Overall, participants' experience of specialist mental health services appeared to be limited.

Eleven participants were currently experiencing mental health problems, of varying degrees, and had experienced significant substance problems at some point in their lifetimes, if not at the time of interview.

Findings

Experiences of mental health and substance use problems

- All participants' experiences of mental health and substance use problems were clearly linked with one another.

- All participants identified a range of significant life challenges, which may have placed them at greater risk of developing mental health and /or substance use problems. Other life challenges had occurred as a direct or indirect result of mental health problems, substance use problems, and a lack of appropriate support or combination of all three.
- Many participants stated that the key causes of their substance use problems and/or mental health problems often lay in childhood experiences. Several causes were identified such as emotional trauma, domestic violence, family use of drugs/alcohol, poor relationships with parents, negative peer influences, poor social skills and experimentation.
- Many participants felt that, once addicted, they continued with their substance use as a coping mechanism, and/or because it was difficult to access services, and/or because of the culture and environment in which they were living (e.g. where peers used drugs and/or alcohol; family problems).

Experiences of services

Many participants had mixed and generally poor experiences of statutory health and social care services, but were more likely to report positive experiences of voluntary service provision. Positive aspects of service provision mentioned by respondents included:

- Practical help with housing and employment, and support in accessing a wide range of services.
- Quick or immediate access to services.
- Positive and consistent relationships with workers.
- Peer support (for example in the context of group work).

Negative aspects of service provision mentioned by respondents included:

- A tendency for services to focus on one problem, rather than looking at the whole range of issues affecting the individual (some reported that they had been prevented from accessing mental health services until they had addressed their substance use problems, or that they had been rejected by mental health services after it had been discovered that they were encountering substance use problems).
- Difficulties in accessing services due to long waiting times or inflexible appointment systems (particularly in accessing support before mental health or substance use problems became established or reached crisis point).
- Poor staff empathy and in some cases discrimination (e.g. participants using illicit drugs felt that they were subject to greater stigma than those who did not).
- Inadequate community based 'aftercare' support services (for example post - detoxification).
- Lack of awareness of the range of services (specialist and mainstream) that were available, and not receiving sufficient information about the services that they were using.

On the other hand - *"If it wisnae for him, ah widnae be here right now"* ["If it was not for him, I would not be here right now".] said by one client of his drugs worker (Mental Health Foundation, 2003).

Existing service provision in Scotland

The main drivers for the development of Mental Health, Drug Misuse and Alcohol Problem services have been described and there has indeed been considerable progress made in recent years in developing policies and guidance which address the health and social needs of the most vulnerable members of society including those with substance abuse and mental health problems. However, as mentioned above, research commissioned by the Scottish Executive to determine the views of mental health and addiction service users has demonstrated that many of these remain negative and that there remains a large gap between aspiration and practice. For instance,

"....I am actually waiting on a new CPN [Community Psychiatric Nurse] just now. I've seen them all before. I've seen drug counsellors, I've seen psychiatrists, psychotherapists. I've never felt any of them took me seriously enough.....Drug counsellors, people like that they look at you as if you're exaggerating, as if you're blowing things out of proportion – 'things cannae be that bad, come on' – you know what I mean? And things are that bad but how can you prove it? Have you got to wait until you do that to yourself?.....because the minute you mention drugs it does go into their heads 'Oh it's down to drugs, its got to be she's a junkie'".

(Mental Health Foundation, 2003).

There are some client groups who are over-represented enough in the demography of comorbidity to merit special mention. These are now discussed.

Survivors of trauma

There is no information as to the degree of sexual abuse in Scotland although the WHO estimate of 20% of women having experienced some form of abusive sexual experience by the time they are 16 years old is frequently cited (WHO, 1998). In addition the experience of physical and psychological violence as a child is an extremely familiar part of presentations at mental health and substance misuse clinics. Those who have experienced a breakdown of care seem to be particularly at risk of a continual lack of well-being, all sorts of substance misuse, eating disorders, depressive experiences, poor impulse control, and self-harming and suicidal ideation. The demonstration of neurobiological changes (especially in those parts of the brain concerned with new learning and social adaptation) associated with post-traumatic stress disorder in women and their apparent plasticity may have implications for future interventions but currently services for this particular group are patchy at best (NIMH, 2003).

In *"Beyond Trauma"* (Nelson, 2001) describes the experiences of a group of female survivors of trauma and the staff of mental health services in Edinburgh. The women, although anxious to speak about troublesome memories, found that staff very often recoiled from this process for fear of 'opening a can of worms' and causing further damage. The position of users was that they should jointly agree with staff on what interventions were appropriate or not and when they should be applied and that simply being, as they saw it, unilaterally and arbitrarily debarred from discussing issues that had been troubling them, often undisclosed, for many years was not helpful. Lack of understanding, confidence, skills and resources often meant that workers were reluctant to become involved in such matters. The conclusion was that broad-based support rather than specifically medical intervention was required and that this should address the full range of an individual's physical and psychological needs.

People with schizophrenia and a substance misuse problem

In 2000 what was then the Clinical Standards Board published its *"Standards for Schizophrenia"* (Clinical Standards Board, 2001). The subsequent assessment pressures put on Health Boards and Trusts proved to be an extremely effective way of quickly and dramatically improving the standards of care for those with a diagnosis of schizophrenia and, by extension, those suffering from other forms of severe and enduring mental illness. Standard 11 – The misuse of alcohol and illicit drugs – said "every person who has a diagnosis of schizophrenia has their use of alcohol and illicit drugs reviewed whenever their needs are assessed by a multi-disciplinary team. A person who misuses alcohol or illicit drugs has access, where appropriate, to the specialist addiction services."

The report that reviewing the country-wide implementation of these standards suggested that most patients with schizophrenia do have their use of alcohol and illicit drugs reviewed regularly and in most services do have access to specialist addiction services followed (Clinical Standards Board, 2002). They noted, however, that there was a wide variety of approaches to the provision of addiction services around the country and said that there was no systematic audit of these services anywhere in Scotland. They also noticed an absence of provision of information about alcohol and illicit drug use for users and carers. It further found that, in general, staff were not trained to care for this specific group and that the recommendation that such training should be included in staff learning plans was not fully met by any Primary Care Trust and that only 4 out of 18 Trusts partially met this standard. The recommendation that there should be a policy regarding the use of alcohol and illicit drugs on all trust premises including guidelines as to how to deal with users or carers being found with such substances on Trust premises was only met by 9 of the 18 trusts. This prompted the publication in 2002 of a Scottish Executive Health Department letter (No. 41) *"Managing Incidental Drug misuse and Alcohol Problems in Mental Health Care settings"* which promotes safe care, prevention and considered responses. These have subsequently been broadly applied to community settings.

People with personality disorder

It is a common perception amongst those working in secondary mental health services in Scotland that people with personality disorder are not amenable to treatment or indeed any form of therapeutic care. The diagnosis appears to be as often as about workers frustration with little apparent response to common interventions as it is representative of an understanding of the processes of assessment and categorisation and as such is often used as much as a term of disparagement as of diagnostic description. There are, therefore, only very rudimentary services available for those with this diagnosis and those that do exist are usually found within forensic settings where approaches tend to be short term and too focussed on offending behaviour to meet the client's need.

Assumptions are often made which link difficult current behaviours to patterns of behaviour which appear to go back to late adolescence and which therefore render the individual untreatable. This clearly contradicts knowledge about some people's vulnerability to particular developmental stressors and the more pernicious effects of substance abuse which can lead to the behaviours which collectively are called borderline personality disorder. There is now abundant evidence to suggest that the condition is containable over time with support from well trained staff in a dedicated setting. These skills and this knowledge are readily transferable.

As yet there is no guidance in Scotland on treating this condition. In 2003 the National Institute for Mental Health published "*Personality Disorders – no longer a diagnosis of exclusion*" which gives expert guidance on the identification, assessment and treatment of those with personality disorders (NIMH, 2003). Its primary aim is to ensure that those in significant difficulty or in significant distress are seen by mainstream mental health services as legitimate candidates for treatment. It puts the prevalence of personality disorder at between 10% and 13% and points out that such people are at significantly higher risk of developing substance misuse problems. In 2005 the Scottish Executive sponsored a seminar to discuss the issues with a view to developing its own recommendations as to how best to deliver services to those with personality disorders and this is likely to be completed by 2006.

Existing models of care for those with comorbid problems

Primary Care services

Primary Care services work widely with this client group, although the degree and intensity varies widely from practice to practice and across areas. Much of this work is carried out in conjunction with Local Authority Services and voluntary agencies. The development of Local Health Care Cooperatives and their subsequent evolution into Community Health Partnerships has significantly enhanced joint working in the Primary Care setting. In a number of areas Primary Care Practitioners established the provision of early brief interventions in substance misuse disorders, screening for mental health problems and substance misuse, shared care programmes for drug misusers

and the establishment of onward referral pathways to specialist services. Unfortunately, the new contract for General Practitioners defined their involvement in substance misuse services as 'enhanced' (i.e. in an optional category when opposed to core services) thus throwing a number of well-established Primary Care treatment systems into disarray. To date there is no example of a General Practice group opting to provide such services for alcohol and drug users and those that continue to do so are supported by special funding arrangements separate from other contracted Primary Care services.

Nonetheless, Primary Care has the responsibility for ensuring that the complexity of their clients' difficulties is appropriately managed and it has to be said that there is also an element of Primary Care acting as a 'safety net' for a wide variety of people (including those with mental health and/or addiction problems) who do not otherwise fit into local models of service provision.

Prison Services

The Scottish Prison Service (SPS) is responsible for the health and social care of their clients and aims to provide an extensive range of services for those with comorbid issues. All addiction services in the SPS follow a recognised care pathway known as the 'Addictions Integrated Treatment Care Process' staffed by key workers including addictions workers, health and social care staff, prison officers, psychologists, case workers and transitional care workers. Every prison also has some degree of mental health provision and the SPS document "*Positive Mental Health*" aims to provide a setting which encourages positive mental health and the appropriate interventions for all mental health problems. The distribution of these resources is inconsistent, however, resulting in a degree of inequity of service around the country.

If a prisoner presents with both mental health and addiction problems the Addiction Co-ordinator will represent the addiction team to the multidisciplinary Mental Health Team. The aim is to join up care as fully as possible by maximising the flow of information and lessening the chances of fragmentation of care. The SPS adopts a policy of 'inclusion' whereby they aim to put offenders back into society "better equipped" and "more able to be part of the community". The transitional care arrangements for those prisoners identified as having an addiction problem is an example of this, ensuring, as it does, the appropriate transfer of care from prison to addiction service.

Voluntary services

Both the generic and specialist voluntary sector addiction services have been working with clients with comorbid problems for some time right across the country. They are positioned at virtually every level of service provision from drop-in centres to residential services. They provide a wide range of mental health and social care interventions and many manage extremely specialised services ranging from crisis units to employment projects. Increasingly the voluntary sector finds itself having to deal with those people unilaterally

excluded from mainstream service provision because of their complex and challenging needs, especially those labelled as having personality disorders.

There are many examples of the development of flexible and inclusive working practices in the voluntary sector which assist retention in service despite having to manage severe challenging behaviour. Because of this style of working, and the often very well developed relationships with their clients that result such organisations are more likely to encounter disclosures of childhood trauma and reports of self-harming. They are often the first point of contact for the client with any form of service and as such are often the point of first assessment, that crucial point which so often determines whether or not the client will engage in any way with services and what the client's journey will comprise. Addiction agencies are often presented with comorbid issues and the subsequent sequencing of interventions will often depend on their relationships with statutory services. Unfortunately, voluntary workers often report less than helpful and frequently dismissive responses from statutory specialist workers.

Example of a voluntary service

An example of such an organisation is the Midway Project in Glasgow. Midway was set up in 1996 for individuals with mental health problems, who were in psychiatric hospitals and their discharge would lead to them becoming homeless. Midway planned to support individuals making the transition from hospital to independent living in the community. To do this required the establishment of a tri-partite agreement between housing (who would provide accommodation) health services and Turning Point Scotland.

In the initial set-up protocols it was envisaged that service users would have a mental health diagnosis only. However it quickly became clear that these diagnostic criteria alone would exclude many potential service users as the majority of referrals had either a co-existing mental health and substance misuse problems or other complex needs. The project evolved to support service users with these complex needs and often chaotic lifestyles. Providing a flexible and individualised service for all has been the primary focus for Midway.

Midway endeavours to support individuals to maintain a tenancy through practical input and emotional support. This encapsulates all aspects of daily living and assistance in accessing mainstream services and benefits. Placement within Midway flats is temporary and service users are supported to access mainstream permanent tenancies from housing providers. The average length of stay is six months.

Working in a participative way with other professionals involved in an individuals care has further ensured that individuals progress to a mainstream tenancy. Midway has established close links with Social Work Services and health care providers. These relationships have ensured that service users continue to function at their optimum level with the knowledge that support

networks are in place whenever a problem arises. This goes a long way to reducing anxiety in individuals and ensuring success of placement.

Specialist services

An, as yet, unpublished telephone survey of all addiction consultants in Scotland (conducted by I. Cameron and C. Lind in 2003) revealed inter alia the serendipitous nature of service provision. Some consultants did not appear to have any particular difficulties in accessing mental health services when needed by their clients although they admitted that this tended to be based on their own personal relationships. Others were clearly frustrated at their inability to find suitable mental health service provision for their clients and, because they were psychiatrists themselves, felt a strong pressure to provide mental health interventions themselves no matter how serious the problem and no matter how inappropriate the expectation might be in their particular clinical setting. A very few felt fully capable of dealing with all the issues themselves and felt no need to develop more specialist services or involve other mental health professionals.

This is reflected in the number of different models of care in Scotland. Services often appear to have developed as much by evolution as by being adaptively developed in response to continuing assessment of the needs of service users. These are provided in a range of care settings from the community to Primary Care to specialist mental health services, although the overall picture is patchy.

In NHS Grampian, Fife and Forth Valley there seems to be little specific provision and individual care pathways are largely dependent upon the relationship between addiction and mental Health services which can vary with time and person.

NHS Highland recently developed a number of Community Psychiatric Nursing posts specifically for this purpose.

NHS Lothian recently appointed a director of prescribing service (a role traditionally performed by psychiatrists) which is allowing the psychiatrists to spend more time working with those with comorbid problems. In addition the Low Threshold Methadone Project in Lothian, which deals with 30 to 40 individuals at any time, gradually engages people in treatment and staff relationships, as an essential preliminary to a move onto other services. This is one way of attending to the needs of a chaotic care group which otherwise can easily be overlooked.

In NHS Tayside there is an expectation of service development although the details are as yet unclear whilst both NHS Borders and NHS Western Isles have traditionally provided an entirely generic service where mental health workers are expected to provide a service for clients with addiction problems also.

NHS Ayrshire and Arran developed a specific 'dual diagnosis' team some

years ago. This consists of a small group of skilled and interested staff (Consultant Psychiatrists, CPNs and Occupational Therapists) and is designed to work with what was considered to be a significant number of people with comorbid issues who, at the time of initial development, were not receiving the service they needed. A direct service is provided for those with extremely complex mental health and addiction issues whilst the care of less complex cases is shared with either Community Mental Health Teams (CMHTs) or Addiction services. Support, advice and liaison work are also offered to CMHTs and addiction services for yet less complex cases. The caseloads are deliberately small; and training and personal development are seen as key features for any professionals working with this degree of complexity. In real terms it functions as a tertiary service theoretically taking referrals only from mental health or addiction services (although GP referrals are occasionally accepted) and far and away the bulk of its client group are on the Care Programme Approach (CPA). Most of the work is domiciliary based and particularly complex cases are often supported by sessional workers from voluntary organisations such as Scottish Association for Mental Health or Barnardos which allows for the development of programmes of assertive outreach. In addition a 12-bedded residential setting is provided which offers safety and skills training. Care programmes are planned in full consultation with the client, usually in terms of a pragmatic analysis of need rather than in terms of primary or secondary diagnoses. In addition to regular contact with CMHTs and addiction services there are well established relationships with other significant service providers such as Primary Care practitioners, Criminal Justice services, the local prison, housing agencies, benefits agencies and the police.

NHS Glasgow, as a response to its internal strategy "*Getting to grips with Drugs in Greater Glasgow*" (Greater Glasgow NHS Board, 1999) identified an 'Addiction Psychiatry for Substance Misusers service' as a priority. The Co-morbidity Evaluation and Treatment Team (COMET) was fully established in 2000 and provides a service for those with severe and enduring mental illness and concomitant opiate use. It consists of Consultant Psychiatrist, CPNs, social workers, psychologists and administrative staff and accepts referrals from a wide range of agencies including the Glasgow Drug Problem Service, the drug crisis centre, GPs, social work services and voluntary agencies. The team adopts a case-management approach with an emphasis on risk assessment. The team, inevitably, is highly skilled but has a commitment to joint working and has close working relationships with a wide variety of agencies. Successful liaison and care shared with other mental health and addiction workers have reduced the number of inappropriate referrals and advice clinics have been established in various addiction agencies. Assertive outreach and motivational enhancement in these settings have helped prevent clients falling through gaps in care. There is local acknowledgement that inpatient beds are needed and this is in the process of being remedied. There is also (in common with NHS Ayrshire and Arran) an understanding that there is a need for more and better training for those non-specialist staff dealing with mild to moderate mental health problems. NHS Glasgow has also recently undergone a significant expansion and reorganisation of its addiction services such that each sector of the city now has its own dedicated

Community Addiction Team (CAT), each jointly managed by health and social work. These teams are designed to work with primary alcohol and drug problems but also work with those with mild and moderate mental health problems. The CATs assess, care plan and manage people into specialist health services (e.g. hospital) as well as offering a wide range of specialist psycho-social interventions around addiction and mental health problems. They are staffed by addiction workers and mental health and physical health nurses. Clients have direct access to the service and the teams are directly linked to specific Community Mental Health Teams. Training and support is offered to providers and care pathways are well established. Finally, residential services are purchased from the independent sector.

Gaps in services

It seems to be a reasonable assumption that recent policy developments in Primary Care and in mental health services should lead to service improvement. Likewise the emphasis on “*Joint Futures*” would be assumed to simplify funding streams and reduce the gaps that still exist between health and social care. The publication of “*Integrated Care for Drug Users*” placed in the public domain a set of principles which in theory should ensure that the complex care issues brought by this client group are better managed in an integrated and systematic way (EIU, 2002). Sadly, although some areas are enthusiastically putting these principles into practice, this is far from universal. The continuing separation of local planning for addiction and mental health issues is not conducive to the process of properly integrating services. Given the lack of Scottish guidance for the provision of services for those with personality disorders and given the high proportion of such clients in addiction services it is perhaps not surprising that their needs are so poorly met. Similarly there is a lack of the broad-based service provision that is required for survivors of childhood trauma and again it is no surprise that so many are dissatisfied with the services they receive and remain unwilling to expose their difficulties for fear of too fragile a response.

Mental health services in some areas operate too narrow a model of assessment and care to allow for the needs of comorbid clients to be fully met whilst some areas lack properly effective joint working practices between addiction and mental health services. There are few examples of this kind of work being made subject to protocols in such a way as to maximise effective joint working and, as a result, it can be difficult to systematise and adjust the core competencies of front-line workers who, through no particular fault of their own may find their skills inadequate when faced with complex needs. There remains an unwillingness to work with this client group which can only intensify the considerable stigma that it already carries and, under some circumstances, can result in treatments not being offered and inappropriate referrals to specialist services, many of whom are already at full capacity. Finally, the continuing reluctance of statutory services to work jointly and equitably with voluntary agencies continues to produce needless gaps in care pathways and in some areas excludes voluntary agencies with their unique perspective from the planning process.

The Scottish Executive's aspirations for service

"Mind the Gaps" made a number of recommendations that Health and Local Authority planners are now expected to take into account when planning services. Initially they comprise of some statements urging the Executive to continue its good work in the fields of social justice, social inclusion, removing the stigma of mental illness, etc. There then follow a number of more specific, topic-centred recommendations. This is a brief summary of those.

Historically there has been a history of disparate planning of mental health services and addiction services. The imperative for strong multi-agency working with this client group if effective results are to be achieved must be mirrored in the planning of services taking account of all forms of care that may be used as an access point to service (especially the voluntary sector). Different areas are beginning to address the problem in different ways. Some are developing specialist teams, some are targeting training and development at generic teams, others are developing integrated care pathways for substance misusers in the expectation that this will better serve those with more complex needs. These are valid local responses aimed at adapting existing situations, but they highlight the need for a national framework of practice based on evidence. This should allow decisions to be taken at local level as to which combination of responses will best suit a particular area in light of identified need, existing services and the related resource. The mechanisms now exist, deriving from Joint Future, *Partnership for Care* and *Integrated Care for Drug Users* to facilitate this process. Key to the success of this will be a new willingness to work across and through existing service boundaries, which is fundamental when dealing with this particular client group.

A wide range of health and social services should be readily available to this group. Sometimes this may need to be delivered in sequences which are not seen as best practice in other areas, or which may not, at first sight, appear to be entirely logical. In particular it may not always be possible in a community setting, where the majority of interventions will occur, to allow the theoretical debate of whether care for mental health issues and care for substance misuse issues should be parallel, sequential or integrated. Inevitably initial clinical and risk assessment will determine what can or cannot be done within that person's current circumstances. Care sequences should be constructed in a pragmatic way which gives most hope of a successful outcome for the client, rather than being driven by theory or practice which is derived from a group with less complex care needs.

Local services therefore require:

- A sufficiently diverse skills mix to allow ready access to appropriate specialist and generic services as a client's needs becomes apparent.
- To be staffed by workers who are sufficiently confident of their own abilities to construct practical care plans in the face of a complexity of rapidly shifting problems.

- To be well enough understood by generic workers so that they can contribute to tackling the less complex issues, partnering the specialist service.
- To be understood and accepted by other potential providers, as well as care funders and commissioners.
- To have significant presence and the capacity for a prompt response in those parts of the community where significant numbers of the client group will be found, often in crisis, and therefore potentially more amenable to accepting help — Accident and Emergency (A & E) departments, in psychiatric crises/emergency/out of hours services and in parts of the Criminal Justice System.

Proposed model

There is no UK or Scottish evidence as to what model of care is most effective in the treatment of those with co-occurring mental health and substance misuse problems. Those involved at a local level must agree on how they can meet the needs of service users in the light of their knowledge of the prevailing conditions. What can be achieved for this client group will depend on local joint agreements on service re-design, which will inevitably be based on the existing service make up and demographic and geographical factors. Matters such as workforce training and service redesign can be set in motion to allow the services to evolve according to an accurate perception of client need. This should help to ensure a broad-based approach to service delivery. Equally important, is the style and culture of service delivery.

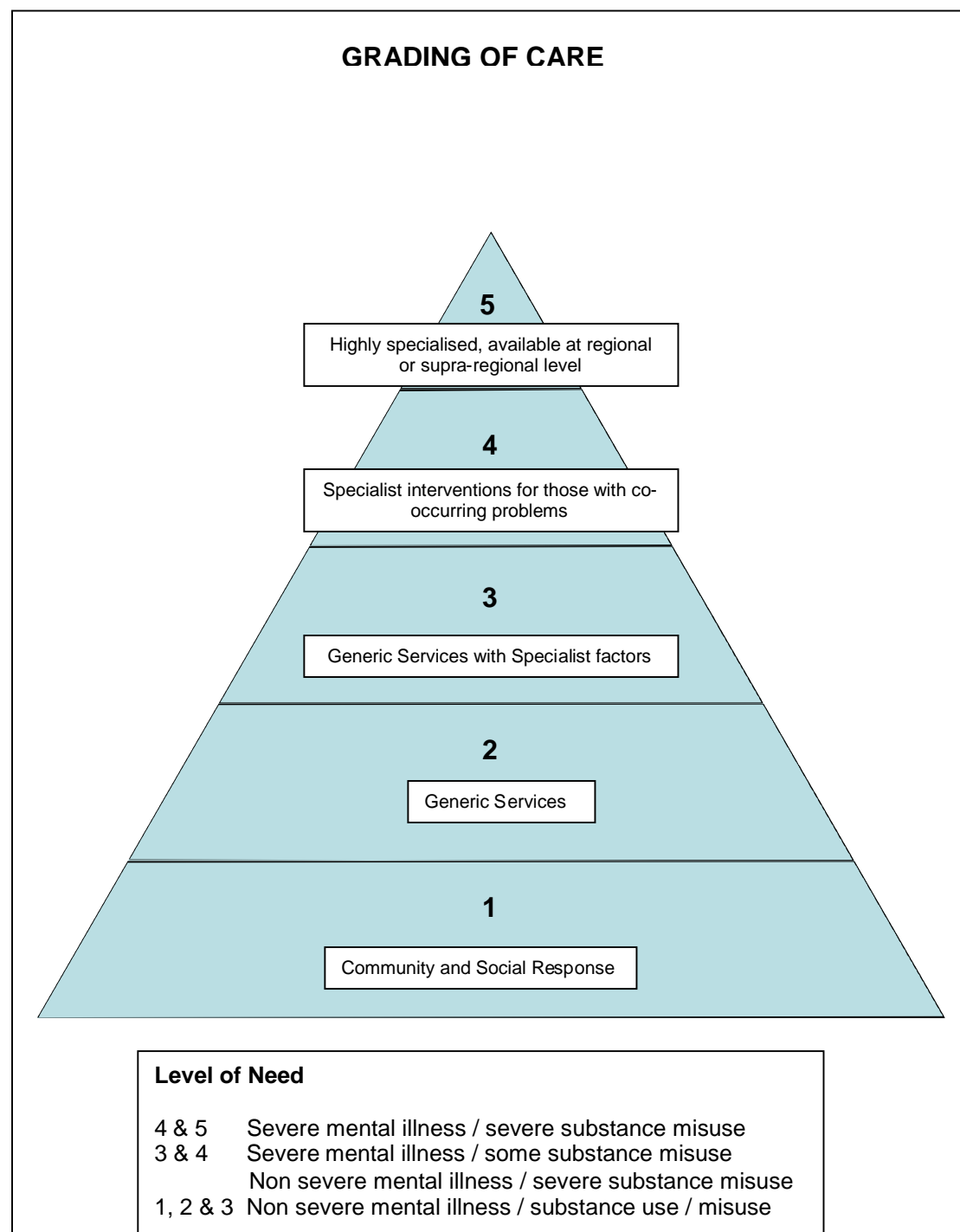
NHS Boards and partner local authorities should consider the needs of this group as one entity. A programme budget for the group should be allocated and managed as a whole. Both NHS Boards and local authorities have continuing responsibilities under the Community Care Act 2002 to expand local joint working including the pooling of budgets.

The following framework offers a suggested approach to the grading of care which might be worthy of consideration for those planning and commissioning services. It is one within which Joint Future principles can apply.

Grading of care

The following diagram (Figure 18.4) attempts to match increasing severity of need to increasing levels of specialism and conceptualises care in 4 or 5 steps, the availability of which forms a pyramid of care.

The steps which might be considered as part of this kind of graded system are outlined below.

Figure 18.4: Pyramid of care

Source: Taken from page 64, SACDM & SACAP (2003). Crown copyright Scottish Executive 2002. Reproduced with permission of Scottish Executive.

Step 1

This might be the degree to which information about services and possible assistance is visible in the client's community. It might include family, friends, social clubs, football teams, fellow pub clientele, churches — anyone who knows of the person, is aware of at least some of his or her difficulty and wishes to try and help. Although often 'unskilled' in service terms, this step has the advantage of being the most readily accessible, least stigmatising and most acceptable, based on a close knowledge of the individual. It is a level of care that can be very powerful and which is often undervalued, if not overlooked, by professional carers. Without doubt there are issues arising from the entitlement to confidentiality, and the risk of stigmatisation. However, the services can ill afford to neglect sources of continuing support for an individual, if arranged sensitively.

Step 2

Generic services of care which are not specifically aimed at either addiction or mental health clients and which might include schools, police, general practitioners, social workers, A & E staff and community workers. These workers will have some skills in the detection of personal difficulty. At present such workers may not feel confident to embark on exploration of such matters, partly because of not wishing to precipitate a crisis, partly because of an unawareness of local services and partly through continuing stigmatisation.

Step 3

Generic services with some specialist function, for instance workers from the voluntary or statutory sector who specialise in either mental health or substance misuse services, (CMHTs, drug agencies etc). These are people who will feel proficient or skilled enough to work in some arenas and not in others, although they will very often have some degree of complementary expertise by virtue of overlaps in training.

Step 4

Specialist services, which intervene specifically for people with co-morbid problems can be derived from the voluntary or statutory sector and have a degree of special expertise in the topic. While some are specifically trained, many have often gained their expertise in the absence of adequate training. They may or may not form a discrete service, one alternative being the dispersal of suitably qualified individuals into the teams providing the Step 3 service, thus producing a 'virtual' team. The advantages of such a model would include the onsite, gradual and fluid up-skilling of generic workers. The disadvantages might be relative isolation, difficulty in accessing peer support and supervision, and the downgrading of skill as they are absorbed into the generic team.

Step 5

Those services would offer a highly specialised treatment resource of which there are currently no examples in Scotland. Both the Glasgow and Ayrshire services have become aware of the need for dedicated residential beds for this group. This might include, as an example, an inpatient unit specialising in the long-term treatment specifically of those people with co-morbid difficulty and personality disorder. Whilst the other 4 steps could be seen as being appropriate within one NHS Board area or one local authority, Step 5 is more likely to be appropriately placed regionally or supra-regionally.

Mapping this intervention sequence requires some analysis of the level of need within the population of those with co-morbid needs. Whilst recognising that some clients will require different levels of care as they move through services the following “quadrant” model can provide a useful aid to conceptualising this.

Severe mental illness/severe substance misuse (Steps 4 and 5)

This would comprise the core client group of Step 4 and would be those whose illness and substance misuse have become so intertwined as to render causal explanations irrelevant. It is with this group that the most pragmatic responses to need will be made, often irrespective of formal diagnosis but rather responding to expressions of need. This group will be the most chaotic, least able to keep appointments, most likely to demonstrate a variety of risky behaviours and least likely to be able to keep up with the demands that society makes on them. They will require careful, well-communicated client-centred care planning with frequent intense input over very long periods of time and will usually benefit most from the input of a wide range of professions under the guidance of a single key worker. Diagnoses might include schizophrenia, severe and refractive affective psychosis and severe post-traumatic stress disorder (including childhood trauma) with associated polydrug abuse. Models of care for this vulnerable group who pose a number of risks need to be researched and developed.

Severe mental illness/some substance misuse (Steps 3 and 4)

This describes a group whose needs might best be met by input from Step 3 mental health services with support, advice and occasional episodes of shared care from Step 4 or directly sharing care with other Step 3 addiction services. The Step 3 services may need to be helped in adjusting their expectations of their client group who may on occasion behave in ways that are difficult to accept. It would include those who misuse substances as a way of ‘self-medicating’.

Non severe mental illness/severe substance misuse (Steps 3 and 4)

This describes a group whose needs might best be met by input from the Step 3 substance misuse services with support, advice and occasional episodes of shared care from Step 4 or directly sharing care with other Step 3 mental

health services. The Step 3 services may need to be helped in adjusting their expectations of their client group, who may on occasion be unwilling to accept personal responsibility for themselves to the degree that would normally be expected. It would include those who have mild or moderate mental health problems as well as those suffering the dysphoria implicit in severe substance misuse.

Non-severe mental illness/substance use/misuse (Steps 2 and 3)

This describes a group whose needs would be best met at the level of Step 2 with support, advice and shared care from Step 3, as appropriate.

The needs of these 4 groups can be met in a number of ways. The functions implicit in the structure above are more important than the structures themselves. The way in which they are achieved will often have their roots in the way that services are already structured. There may, however, be real tensions locally between:

- The exclusivity and expense, but potentially more effective outcomes, of having a Step 4 service.
- The potential burnout and de-skilling of an allocated specialist worker to Step 3 services to provide much needed support and advice for generic workers.
- The more equitable, but potentially less effective service, of partially up-skilling all generic workers.

These can only be resolved at a local level.

Needs assessment/service mapping

Planners and commissioners of services need to be aware of the nature and scale of the problem, to ensure the appropriate targeting of resources. Evidence previously presented, however, shows the extent of co-occurring substance misuse and mental health problems already known throughout Scotland. Further extensive needs assessment work using epidemiological techniques at local level is probably not, therefore, required at this time. Service commissioners should concentrate on looking to see how gaps in current service provision, its profile, culture and flexibility to respond as highlighted within this report, might best be met.

This would be highlighted by service mapping and looking at the links and referral patterns between them in line with the Joint Future and Integrated Care Agenda. Within that, the following issues need to be taken into account.

- This client group is extremely challenging, but nevertheless deserves access to the most appropriate and timely services.
- These services should be available where there are existing facilities where this client population is likely to be found.
- Expectations of what can be achieved through treatment and intervention need to be emphasised to client and to service providers alike.

- Interventions should be as broadly based as possible, and include social, education, and employment elements.
- Commissioners should consider how best to pursue service re-design in order to address the needs of this client group within mainstream, generic services with easy referral to meet more specialised needs.
- Voluntary sector services should play a key role in planning and delivering treatment and care to this client group and should be resourced accordingly.
- Early intervention is likely to be cost-effective, avoiding inappropriate referrals to more expensive specialist services.
- Interventions need to be person-centred and not based on existing service availability. Services should aim to give the client as much involvement in decision making, partnership in care and sense of control as is appropriate in the circumstances.
- The 'take this letter and go and see this person I have decided you need to see' approach is highly unlikely to be helpful; successful service collaborations are likely to involve link workers who 'stay with' the client, especially the more chaotic individuals, in their early contacts with the service. This should reduce missed appointments and help to reassure clients of a genuine commitment from service providers. There are successful alcohol liaison nurse models, particularly in Edinburgh, which could be adapted.
- Independent advocacy should be a key feature of service provision, with workers helping service users through treatment and care services.
- Liaison with service users and those who care for them is an essential part of the process of staying in focus and making sure what is done is as fit for purpose as possible. Who better than the users of the service to let those providing and those commissioning the service know how it was for them?

Training and support

The need for proper support and training for all staff has been emphasised throughout. Staff, whether in mental health or substance misuse services, need to develop the skills necessary to identify and understand clients with co-occurring problems, to develop the confidence to deal with them, and to be given the capacity to cope. Training and continual professional development should include:

- Development of assessment skills based upon substance misuse and mental health assessment frameworks.
- Facilitation and handling of disclosure about previous traumatic experiences.
- Integration of knowledge of drug and alcohol trends for individuals with mental health problems, into practice.
- Effective working with a broad range of mental health interventions and treatment modalities.

Effective staff supervision, both clinical and managerial, is equally important. Support mechanisms should also be in place for staff at all levels to help them cope with this particularly challenging client group.

Conclusions

The document "*Mind the Gaps*" made a number of fairly specific proposals as to what services should be available to this client group and produced a service blueprint which Health Boards and Local Authorities will be expected to take into consideration when planning services. The degree to which this particular agenda will be seen as a priority amidst other health pressures is open to debate but it has to be said that the Scottish Executive's track record for pushing the case for those whom it feels are stigmatised or excluded has to date been very good.

The Framework for Mental Health services, although not presented as a mandate was used very successfully as part of the annual health board appraisal process to make it absolutely clear (inasmuch as these processes are ever clear) that the Executive expected Boards to make and fund major changes in the way that mental health services were structured and resourced.

Similarly the Clinical Standards in Schizophrenia Assessment exercise and the subsequent pressures brought to bear on Health Boards and Local Authorities to be seen to be complying with them prompted wholesale changes in the way that those with severe and enduring mental illness were treated. This does seem to be an issue that genuinely concerns those in power and although such wheels grind slowly any grinding at all can only be welcomed. Having said that, it is now two years since the publication of "*Mind the gaps*" and the author, for one, has seen no sign and heard no mention of the document at the most senior levels of the Health Board area in which he works.

However, there is more than one way to skin a cat and the Executive Health Department were very supportive of an ultimately successful application to produce a SIGN (Scottish Intercollegiate Guideline Network) guideline for Dual Diagnosis. These are evidence-based good practice guidelines which, after development by an expert group, are distributed throughout Scotland. A further part of the Health Board appraisal process is an assessment of the degree to which their various practitioners are complying with these guidelines and historically this has been the driver for much worthwhile clinical change. Development of this guideline is expected to start in 2005.

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Part III

Comorbidity in a European context

Chapter 19 Comorbidity research in Europe

A Baldacchino and J M Corkery

Introduction

This chapter sets out to identify the issues that are relevant to future research on co-morbidity that will have a pan wide European relevance not only to the academic community but also the psychiatric, addiction and public health clinical environment. The country profiles identify core challenges that are fundamental to acknowledge and study further so as to inform and empower service providers and service users to respond effectively to this phenomenon.

Reasons for investigating comorbidity

There are a number of reasons why comorbidity is an important issue to examine. These are briefly explored below.

However, it is worth reminding ourselves that in some societies – as is so ably demonstrated in Chapter 5 – comorbidity does not appear on the radar of medical researchers, policy-makers and service providers and thus is not an issue. Although co-morbid populations may exist, their nature and extent remain unexplored and thus unknown. If there is thought to be no co-morbid population then there will be no need for research, which in turn means there is no identified subjects to research.

For a phenomenon, even a medical one like comorbidity, to be recognised it has to be ‘grounded’ in objective evidence and ‘constructed’ by society. In some countries, e.g. France, comorbidity is not an issue because it has not been conceived of as such (Chapter 5), and in others (such as Poland, see Chapter 13) it has been difficult to ‘get it on the agenda’ so that its existence can be at least debated let alone researched.

If a demand is established then an object can be created. Thus, if co-morbid individuals or their advocates/champions can generate sufficient demand for services for their identified needs then the issue of comorbidity can be engendered and appropriate policies developed. However, obstacles exist to prevent such steps to be initiated. These include the existence of a coherent social group based upon a set of common interests or experiences who can initiate this process of ‘claims making’. If there are no demands for the identification and assessment of comorbidity, then there is going to be no systematic research undertaken.

Prevalence rates of comorbidity do appear to be relatively high across different parts of the world; however, most of these are reported by studies in North America, Australasia, and Europe with relatively few from other parts of the world (e.g. the Middle East and southern Asia). A few examples will

suffice for illustrative purposes. More details can be found in other reviews (see, for example, Schifano, 2002; Crawford *et al.*, 2003; Abou-Saleh and Janca, 2004; Samet *et al.*, 2004).

General population studies

The Epidemiological Catchment Area study of US adults reported the following findings: lifetime diagnosis of an anxiety disorder 14.6%; lifetime affective disorders 8.3%; lifetime addictive disorder 16.7%; one or more lifetime mental/addictive disorder 32.7% (Regier *et al.*, 1990, 1998). Even higher rates of comorbidity were found in the US by the National Comorbidity Study (Kessler *et al.*, 1994). A high level of association was found between alcohol and drug use disorders by the National Longitudinal Alcohol Epidemiological Survey (Grant, 1995).

A recent study of comorbid psychiatric illness and substance misuse in primary care in England and Wales found that the estimated number of comorbid cases in the general population rose from 24,226 in 1993 to 39,296 in 1998 (Frischer *et al.*, 2004). The annual period prevalence of comorbid drug use rose during this time from 18.7/100,000 patient years of exposure (PYE) to 36.6/100,000 PYE; the rate for comorbid drug dependence increased from 26.1/100,000 PYE to 49.6/100,000 PYE. Although comorbid licit drug dependence rose from 10.6/100,000 PYE in 1993 to 16.1/100,000 in 1995, it then fell to 10.8/100,000 PYE in 1998.

Institutional studies

The Office for Population Censuses and Surveys (OPCS) study found that lifetime drug use was reported by 5% of the household sample, but by 10% of those in hospitals, hostels and residential homes (Farrell *et al.*, 1998). Rates for those with schizophrenia, delusional or schizoaffective disorders were 7%, for those with affective disorders 18%, and for those with neurotic disorders 22%. Twenty-eight percent of the homeless sample, and 46% of those attending night-shelters reported drug use.

A one-year prevalence rate amongst those with psychotic illness in a London sample for any substance misuse problem was 36.3% (Menezes *et al.*, 1996). A similar rate (37%) was found in a Nottingham sample of patients with first episode psychosis (Cantwell *et al.*, 1999).

The National Treatment Outcome Research Study (NTORS) recruited 1,075 adults attending drug treatment programmes, of whom 90% were opiate dependent (Marsden *et al.*, 2000). Higher levels of psychiatric distress were found for males than females. Rates for males were: anxiety 32.3%; depression 29.7%; paranoia 26.9%; and psychotism 33.3%. Virgo *et al.* (2001) report comorbid severe mental illness (SMI) and substance abuse or dependence in 12% of addictions and all adult mental health patients, and 20% of adult mental health patients with SMI in Eastern Dorset. Strathdee *et al.* (2002) found across a range of five treatment settings in the south London borough of Bromley an overall rate of dual diagnosis of 45%, ranging from

24% in primary care to 93% amongst substance misuse services. Weaver *et al.* (2002, 2003) found in a study of two inner-London areas and two cities elsewhere in England that 32% of users attending drug services had two or more psychiatric disorders and that 55% of those accessing alcohol services had two or more such disorders.

The Office for National Statistics undertook a survey in 1997 of psychiatric morbidity among prisoners aged 16-64 in England and Wales (Singleton *et al.*, 1998). Of those on remand 81% of males and 13% of females had two or more of the five mental disorders considered (personality disorder, psychosis, neurosis, alcohol misuse, and drug dependence); the proportions for sentenced prisoners were 72% and 71% respectively for males and females. Those with anti-social personality disorder were more than six times more likely than others to report drug dependence in the year before coming to prison.

The prevalence of comorbidity has been reported to be on the increase for the last two decades or more (see, for example, Cuffel, 1992; Druglink, 1996; Crawford *et al.*, 2003). Moreover, prevalence appears to be continuing to increase in some countries, e.g. Finland (see Chapter 9), Poland (see Chapter 13) and the UK (Frisher *et al.*, 2004). Franey and Quirk (1996) have suggested that increasing prevalence may be associated with trends in society as a whole. Examples they put forward include: the increased availability of psychoactive drugs; clients of mental health services may be more open in admitting substance use and health practitioners are more alert to the possibility of such use; greater opportunities have been created for previously institutionalised individuals to acquire psychoactive substances and to misuse prescribed substances through the move to care in the community.

Why do we need comorbidity studies?

There are several reasons why it is important to have good community-based studies of psychiatric morbidity (Jenkins *et al.*, 2003; Abou-Saleh and Janca 2004). These are outlined below.

In order to have policy that is effective, it is a fundamental prerequisite that it is based on epidemiology and evaluation of the social and economic consequences of psychiatric morbidity.

It is desirable for both planning health and social services to have representative information for a geographical area. For example, community surveys can help to document the take-up of existing services and provide estimates of the extent of unmet needs and what would be required to meet them.

Hypotheses about the aetiology of comorbidity can be generated and tested (in a limited way) through the gathering of valid information on prevalence and associated factors of presumed causal importance.

The possibility of monitoring the health of a population and trends in disease, as well as changes in potential risk factors, can be facilitated through the repetition of community surveys.

There is a clear need for epidemiological studies of the prevalence of comorbidity in Europe, together with long-term follow-up studies of outcome to determine naturalistic course with or without treatment. In this context, longitudinal studies of the evolution of onset substance use and other psychiatric disorders over time are needed, together with cross-sectional studies of the patterns of their inter-relationships using diagnostic instruments with high reliability that can generate more specific DSM-IV-like co-morbid diagnoses.

A pan-European dataset looking at the prevalence of comorbidity in different populations and environments is necessary not only in order to help us understand the patterns in time of this phenomenon but also to target resources adequately to the population(s) most in need. This should include employment and training needs, as well as inter-personal relationships and self-adjustment.

Problems with comorbidity studies

A number of areas of comorbidity studies have been identified in which there are problems. Wittchen (1996) suggests the following: conceptual; units of contents; time window and accuracy of resolution; and assessment method. Crawford *et al.* (2003) identify several additional problems which the present authors have defined as follows, and have included their own comments: setting; subjects; intervention(s); and context.

At a more fundamental level the paradigms used in research have been limited. For example, as noted in Chapter 3, there has been very little experimental work employing behavioural neuroscience techniques to explore the common neuropathology of co-existing mental disorders. Animal models have only a limited application in this area and are currently restricted in terms of the aspects which they can illuminate. Neuropsychology needs to develop instruments that can look at common aetiologies, although evidence thus far suggests that there is unlikely to be a single biological mechanism at work. However, this does not mean that other dimensions should be left unexplored. This all suggests that bringing a range of disciplines or paradigms to bear on the phenomenon may yield a greater understanding even if a full explanation still remains beyond our grasp at present.

Conceptual

Considerable confusion and misleading information has arisen from many studies of comorbidity because of loose definitions of the term. Confusion has also arisen because many research groups, for example, only vaguely describe specific diagnostic algorithms and the degree to which they consider diagnostic exclusion rules. For a better understanding of comorbidity findings

a clear specification is necessary. This is relevant whether none, some or all of the diagnostic exclusions and hierarchies have been considered. Complex sets of symptom, syndrome, and diagnostic exclusions (as employed by DSM-III-R, DSM-IV and ICD-10) might all affect the resulting comorbidity figures as well as their interpretation (Wittchen, 1996).

These classification systems are of course predicated upon the assumption that we are describing a coherent medical diagnostic entity. But, as we have seen, this assumption is not necessarily valid. Further examination shows that different paradigms and theoretical models have been employed over several decades by various schools of thought in the medical and psychiatric arenas. Moreover, it has been clearly demonstrated that 'comorbidity' and 'dual diagnosis' like any other phenomena are, at base, social constructs. Their existence - or non-existence - depends on them being recognised as a 'fact'.

Further problems with defining, as well as treating, co-morbid populations is that historically mental health and substance misuse services have evolved in their own way, using different language and models to inform their service policies and objectives (Todd *et al.*, 2004). Additionally, such difficulties may be made more complicated because of different funding streams and fundamental differences in philosophies of care (Lehman and Dixon, 1995).

Units of contents

The type and number of diagnostic classes examined in a study can influence comorbidity findings. Simple proportions for comorbidity without a description of the specific diagnostic method and appropriate statistical analyses (controlling for chance agreement) are practically meaningless. This is because the greater the number of prevalent diagnoses considered in the analysis, the greater the probability of chance association. Studies need to clearly specify what classes of mental disorders are specifically considered, and which other axes are included as well (Wittchen, 1996).

Time window and accuracy of resolution

Rates for comorbidity are dependent on the time-scale of assessment for each disorder. Some studies tended to limit the term comorbidity to pure cross-sectional syndromes and disorders, whilst others prefer a lifetime-ever approach. Generally, speaking, only a small number of studies, at least up to 1996, reported specific definitions of cross-sectional diagnoses (Wittchen, 1996).

Prevalence figures may be artificially inflated by taking a lifetime overview of a client's comorbidity experience, whereas artificially low rates may be generated by adopting a time-limited or 'service year' approach. This aspect can be further complicated by the fact that diagnosis may change over time at an individual level (Todd *et al.*, 2004), but moreover the method(s) of assessment and diagnosis may change within a country or scientific community.

Assessment method

The assessment strategy or instrument used to examine comorbidity can affect results. For example, a comparison of ICD-10 and the Composite International Diagnostic Interview (CIDI) suggests that two or three times as many diagnoses as the clinician would assign in routine diagnostic assessment are revealed by standardised instruments. This is particularly true for substance use disorders. Although it is not clear which of the diagnoses are really valid, it can at least be assumed that the higher comorbidity rates of the CIDI cannot be fully explained as artefactual or invalid. There is some evidence that in the mid-1990s clinicians focused more on the current circumstances of a patient rather than prior history, minor mental disorders, and were more likely to employ implicit hierarchies. Since most clinicians were trained at that time in traditional nosological concepts and ICD-9 they were more likely to include in their diagnosis features that might justify a separate diagnosis (Wittchen, 1996).

Francis *et al.* (1990) suggest that semi-structured diagnostic instruments might be more susceptible to 'halo effect' than standardised instruments. (The 'halo effect' is where one characteristic or quality of an individual overrides/overshadows all other attributes, i.e. the extension of an overall impression of one particular outstanding trait to influence the total judgement/assessment of that person by an observer.) Kessler *et al.* (1994) demonstrated that technical modifications can significantly impact symptom reports as well as the accuracy of dating lifetime episodes of mental disorders; such modifications can include changes to the order in which disorders are assessed, the use of stem questions, and memory problems.

Settings

The settings where studies take place differ and even if apparently similar may not be so. Studies of comorbidity in one region or location may not reflect the situation in another, especially in the international context. For example, it may not be appropriate to compare rural New Hampshire, USA with inner-city London, UK.

There has been a marked lack of research into comorbidity in continental Europe, and this comes through time and time again in the country profiles. In some countries such information is non-existent; even UK studies are restricted to England and Scotland. This means that it is difficult to know whether or not there is a problem population experiencing comorbidity in a region or country. In turn this means it is impossible to decide on what services, if any, are needed, and how to allocate resources. It is clear that in many European countries there is a need to set up systems to capture routine information on the extent of co-existing mental disorders including substance misuse.

For clinical populations it is necessary to distinguish between general psychiatric and addiction services. For example, in general psychiatric services alcohol and cannabis are more likely to be encountered as the

comorbid dimension, whereas in addiction services depressive, anxiety and personality disorders are going to be the additional problems most commonly reported.

Subjects

Studies may have comorbidity as their primary research area or this may just be a secondary research question within a larger study; this will affect the type of population being studied. Research studies often exclude substance use patients and those with severe and enduring mental illness. The characteristics of the population under study may differ according to the physical setting e.g. there are higher prevalence levels of both psychiatric disorders and substance use disorders in prisons than in general households, and the same applies to comorbidity levels. Prevalence studies conducted with in-patient samples are more likely to give an overestimate of general population prevalence rates.

Generalisations about co-morbid populations are difficult for a number of reasons. One of the principal arguments put forward is that those dually-diagnosed are extremely heterogeneous, and across many dimensions e.g. demographics, routes to comorbidity, type and severity of mental disorder, type and pattern of substance use.

A lack of consensus about the aetiology of comorbidity and the confounding by recent substance use makes the identification and diagnosis of it more problematic. The limited availability of properly validated and reliable diagnostic instruments also contributes to the difficulty of generalisation of findings from one setting to another. Moreover, there is no standardised way of describing social and health care systems and pathways through care for co-morbid individuals.

Many populations studied are opportunistic or convenience samples, rather than selected using randomised sampling techniques. This makes comparisons across regions, nations and societies very difficult.

Interventions

Definitions or descriptions of interventions delivered to a variety of groups can differ. Many different combinations of co-morbid populations and interventions are possible. The interventions and combinations thereof employed may vary.

Context

The context(s) within which studies are set need to be taken into account when examining prevalence levels, etc. These features may be influenced by a range of factors, including: changing drug availability (this is not necessarily only increasing over time); changing prices (again this is not always decreasing); different drugs gaining prominence; changes in acceptance of drugs (more or reduced tolerance) and associated changes in seizure and

arrest policies; differences in patterns of modes of use, administration routes, etc. All of these can differ across regions - local, national, and international.

Another aspect of context is the duration of time over which the phenomenon is studied. Studies that follow individuals over a long time period of time should be able to provide more information on the natural history of comorbidity, aetiology and evolution, common risk factors and causal relationships (Sheehan, 1993; de Lima *et al.*, 2002).

Research on 'upstream' factors has been called for by Abou-Saleh and Janca (2004), particularly those which operate at a population level, for example, housing, income, political systems, and social milieux. There are also new opportunities to explore populations in developing countries that have not previously been studied with regard to psychiatric comorbidity. For example, Abou-Saleh (2001) found low rates of such comorbidity in a traditional Arab community and demonstrated the influence of culture on the assessment and diagnosis of comorbidity as well as its outcome and service utilisation. Such an approach may be relevant in such countries as Malta.

Problems with comorbidity and assessment and screening (including instruments)

Lehman *et al.* (1989) argue that clinical assessment and classification methods should be guided by their clinical utility. However, the dilemma facing scientists seeking to do this for those who are diagnosed as being comorbid is that relatively little is known about the nature of such patients' problems and what helps them and, therefore, it is not clear what must be assessed in order to assign them to the most appropriate treatment(s). An iterative process linking assessment and treatment outcome should lead to better assessment techniques and thus better care.

When conducting diagnostic interviews reliable and consistent information is crucial; the accuracy of data provided by the patient and the stability of presenting symptoms need to be taken into account. In order to distinguish between chronologically primary and secondary disorders, age of onset and duration of symptoms (as well as periods of remission and symptom offset) are fundamental building blocks onto which further information can be added and a fuller picture constructed. Because substance misuse can affect functioning and colour symptoms of co-morbid Axis I disorders, it is essential that continuous or on-going comprehensive assessments should be standard practice. At initial, as well as at on-going, assessment it is also imperative to obtain collateral detailed information from the referring agencies and significant others. This will lessen the distortion caused by intoxication, insufficient periods of abstinence on the part of patients, impaired memory, inconsistent answers, or deliberately falsified information.

Effective and appropriate treatment of comorbidity depends on thorough and continuous dynamic assessment. The more comprehensive and focussed the assessment the better the understanding of the relationship(s) between

disorders. Here again, the fundamental building blocks are the age of onset and determination of sequelae of disorders. Having details of the present illness, past psychiatric illness, and development history should facilitate the construction of the onset of each of the co-occurring disorders and their aetiology (Oyefeso, 2002). It is quite common to encounter presenting conditions which can be the sequelae of an underlying psychopathology. These symptoms can be the direct effects of drugs, substance withdrawal, independent medical problems, or physical complications of substance misuse. For these reasons, assessment should cover medical, neurological and toxicological investigation.

There is a growing body of evidence to suggest that genetic factors may play a part in the aetiology of some psychiatric disorders including those related to substance use. It is therefore important to obtain information on the psychiatric and substance use history of family members.

Screening tests for comorbidity can be considered in three categories: interviews; neurocognitive impairment; and hair and urine analysis. These will be briefly examined in turn. Overviews on specific interview instruments have been published elsewhere (see, for example, Crawford *et al.*, 2003; Rome, 2003; Samet *et al.*, 2004).

It is likely that practitioners and/or service providers will use a range of methods and tools to assist them in assessing the needs of different client groups. In some countries (e.g. Bulgaria) standardised diagnostic instruments have not been used routinely for verifying co-morbid diagnoses. A number of factors need to be borne in mind in deciding which is the best tool for the job in hand.

- Make sure that requirements are in line with the stated aim of the instrument being considered. Quantitative rather than qualitative information is likely to be generated by instruments primarily geared towards evaluating outcomes.
- Make sure the instrument has been validated for use with the target client group. Frequently, tools are too broad in scope to identify particular issues closely associated with specific client groups.
- Assessment tools vary in the time frames in which they are interested.
- Select measures that are sensitive to the type of substance use being investigated, e.g. the type of drug, mode and route of administration.
- Scoring methods vary from instrument to instrument, and may have different weighting methods.
- Be aware that short periods of abstinence may be more significant for substances associated with steady use than for those characterised by binge or episodic use.
- Time taken for completion and scoring can range from a couple of minutes to several hours. Screening instruments tend to take less time to complete than comprehensive tools, or specialist or specific assessments.
- Administrative and training needs vary depending on the method of administration and scoring and the experience of the investigator.

Interviews

A number of interview questionnaires are outlined below.

- Addiction Severity Index (ASI)

This instrument is a widely used semi-structured clinical/research interview (Appleby *et al.*, 1997). It is used to assess the severity of seven problem areas usually found in persons with substance use problems: alcohol, drug, employment, family/social, legal, medical, and psychiatric (McLellan *et al.*, 1980 and 1992). Information is gathered on recent (past 30 days) and lifetime problems in all of these areas. Luke *et al.* (1996) consider the ASI useful because it assesses functioning across a range of domains in a relatively short period of time (50 to 60 minutes to administer and 5 minutes to score). Two scores are generated: severity ratings are subjective ratings of the client's need for treatment, derived by the interviewer; composite scores are measures of problem severity during the prior 30 days and are calculated by a computerised scoring program.

- Alcohol Use Disorders Identification Test (AUDIT)

This test was developed by the World Health Organisation (WHO) to identify persons whose alcohol consumption has become hazardous or harmful to their health (Babor *et al.*, 1992; Saunders *et al.*, 1993). This is a 10-item self-report instrument for those with severe and persistent mental illness. It is designed to identify clients whose alcohol use places them at risk of alcohol problems or those who are already experiencing such problems. There are 3 questions on the amount and frequency of drinking, 3 questions on alcohol dependence and 4 on problems caused by alcohol. It takes a health professional or a paraprofessional 2 minutes to administer and a further minute to score. It has been translated into Japanese, Norwegian, Romanian and Spanish.

- Composite International Diagnostic Interview (CIDI)

This is a fully structured interview designed for survey interviewers (Robins *et al.*, 1988). Like SCAN it was developed by the WHO for cross-cultural studies and is available in 13 languages. Questions are read as written without interpretation. Standardised probes on a flow chart are used to ascertain a doctor's attribution of organic aetiology to depressed mood and loss of interest or pleasure. If no doctor was consulted, probes are provided to elicit the subject's opinion about whether the symptom was caused by a psychoactive substance or physical illness. The instrument employs both DSM-IV and ICD-10 criteria. Samet *et al.* (2004) suggest that a multi-method approach should be used rather than CIDI on its own due to the wide variation across time-frames and age-groups for prevalence of anti-social personality disorder yielded by CIDI.

- Chemical use, abuse and dependence (CUAD) scale

This scale takes about 20 minutes to administer. It is a reliable and valid tool for the identification of substance use disorders amongst the severely mentally ill in an in-patient setting (Appleby *et al.*, 1996). It takes less time to administer than the ASI and produces a diagnosis in DSM terms.

- The Dartmouth Assessment of Life Instrument (DALI)

This is an 18-item tool that takes about 6 minutes for an interviewer to administer (Rosenberg *et al.*, 1998). The instrument was formulated by taking the most valid questions from 10 well-established screening questionnaires for substance use disorder, and was primarily developed to detect alcohol, cannabis and cocaine use disorders. DALI can be employed as a screening instrument for this disorder in the psychiatric population. It is available at: <http://www.dartmouth.edu/dms/psychc/>

- Drug Abuse Screening Test (DAST-20)

This is a 20-item instrument that may be given in either a self-report or in a structured interview format, taking 5 minutes to complete. It correlates extremely well with the original 28-item version. It does not generate any information on alcohol use or abuse. It identifies individuals who are abusing psychoactive drugs, and yields a quantitative index score of the degree of problems related to drug use and misuse. The areas covered include: marital and family relationships; social relationships; employment; legal; and physical (medical symptoms and conditions).

DAST-10 is a shorter alternative to the full 28-item DAST. It is used to identify problems in the previous year resulting from drug-use (Maisto *et al.*, 2000). Crawford *et al.* (2003) also see this as a good screening instrument.

- Psychiatric Research Interview for Substance and Mental Disorders (PRISM).

This is a structured interview designed to be administered by clinicians or lay interviewers with sufficient training. Structured probes assess temporal relationships of symptoms and substance use. It assesses 22 Axis I and two Axis II psychiatric disorders. Now based on DSM-IV, there are reports of improved reliability compared to previous instruments used for assessing psychiatric disorders in those who have co-morbid substance use disorders (Hasin *et al.*, 1996; Samet *et al.*, 2004). Although Crawford *et al.* (2003) regard it as a labour-intensive exercise (taking from 45 minutes to 2 hours to administer), they believe that this is compensated for by its enhanced diagnostic accuracy. A computerised version is being prepared to increase speed and ease of administration.

- Substance Abuse Treatment Scale (SATS)

This is a model used to evaluate progress in treatment, but can also be used as an outcome measure (McHugo *et al.* 1995). SATS assesses the stage of a client's substance abuse treatment but does not provide a diagnosis. The Scale has eight points: (1) Pre-engagement; (2) Engagement; (3) Early persuasion; (4) Late persuasion; (5) Early active treatment; (6) Late active treatment; (7) Relapse prevention; and (8) In remission or recovery.

- Schedule for Clinical Assessment in Neuropsychiatry (SCAN)

This is a set of instruments for assessing a range of clinical phenomena. Developed by the WHO for cross-cultural studies, it is available in 13 languages (Janca *et al.*, 1994). One of its core instruments is the Present State Examination (PSE); ratings are coded onto score sheets and a computer program generates both DSM-IV and ICD-10 diagnoses based on these ratings. The PSE is a semi-structured clinical examination in which the interviewer uses clinical judgement to ascribe specified definitions to clinical phenomena using a special SCAN glossary. The interviewer (whether psychiatrist or psychologist) cross-examines the patient, matching responses to a description in the glossary, and if a symptom is present decides how severe it is. Once matched, this description can be coded by reference to an attributional rating scale by the clinician. Based on clinical judgement, the interviewer can depart from the prescribed wording and order of questions. The instrument demands considerable training to be correctly used. There are only limited data on SCAN's reliability and the validity of psychiatric diagnosis in substance abusers.

- Structured Clinical Interview for the DSM (SCID)

This is a semi-structured interview designed for use by experienced clinicians, taking 75 minutes to administer (Spitzer *et al.*, 1990; First *et al.*, 2001). It uses the DSM-III-R diagnostic criteria to enable the interviewer to either rule out or establish a diagnosis of drug abuse or drug dependence and/or alcohol abuse or alcohol dependence. Standard initial questions are provided and the interviewer may re-phrase questions to clarify an item if required. Substance sections precede psychiatric sections so information on substance use is available to assess comorbidity. This instrument may be problematic in respect of assessing substance aetiology because it relies on the interviewer's clinical judgement, and is not sufficiently detailed to yield unambiguous information (Samet *et al.*, 2004). Results of reliability studies suggest varying degrees of success when applied to different client populations.

The Mini-SCID is a computerised, shortened version of the SCID used as a quick method of screening for the major adult Axis I psychiatric disorders. A client can complete the instrument in 25 minutes, after a brief tutorial (Spitzer *et al.*, 1992).

- Semi-Structured Assessment for the Genetics of Alcoholism (SSAGA)

This designed to be administered by non-clinicians with review by a clinician (Bucholz *et al.*, 1994). Current and lifetime diagnoses are assessed. The instrument takes between 45 minutes and 4 hours to administer; the longer duration is for individuals who report extensive physical, psychological or social manifestations of alcohol abuse or dependence. Good results for reliability have been reported. It is available in seven languages, and both DSM-IV and ICD-10 items can be extracted.

- Stages of Change Readiness and Treatment Eagerness Scale (SOCRATES)

This is a 19-item self-report measure developed to evaluate the readiness-to-change among drinkers or drug users (Miller and Tonigan, 1996). It generates three factorially-derived scale scores: Recognition; Ambivalence; and Taking Steps. The scores from this instrument have proved to be reliable and stable for dually diagnosed clients (Carey and Correia, 1998).

Neurocognitive impairment

All substances have an effect, to varying degrees, on thought and cognition. Such neurocognitive impairment will affect the process of assessment. Cognitive deficits are not always apparent and may be misinterpreted as defensiveness, denial or 'bad behaviour'. Although the assessment of this impairment can be complex and time-consuming, it can help to explain a lack of progress in treatment.

Hair and urine analysis

Recent substance use may result in symptoms that are indistinguishable from psychiatric symptoms. To obtain an accurate diagnosis it is essential that patients are kept substance free for a lengthy period say 6 weeks, and that their self-report is checked with urine or hair analysis. Urine testing has a major advantage over urine analysis in that it can reveal substance use over a much longer period (McPhillips *et al.*, 1997).

Problems with special groups

People at risk of social exclusion are more likely to experience ill health (Wilkinson and Marmot, 1998). Individuals experiencing comorbidity are also often experiencing other complex social problems. There is increasing evidence from qualitative and quantitative research methodologies that comorbid individuals experience higher rates of unemployment, homelessness, violence, childhood trauma and other forms of psychological, emotional and/or social deprivation. The Scottish School Adolescent Lifestyle and Substance Use Survey (SALSUS) 2002 shows that nearly 1 in 4 of 13 year olds and almost 1 in 2 of 15 year olds report drinking alcohol in the previous week and 77% of 15 year olds report episodes of alcohol intoxication (ISD, 2003).

Meantime 8% of 13 year olds and 23% of 15 year olds reported using drugs in the last month. The General Household Questionnaire (GHQ) scores of 5% boys and 8% girls of 13-15 year olds were over 4 (Shaw *et al.*, 2000).

Men living in most deprived areas (deprivation category 7 on the Carstairs scale) are seven times more likely to die of an alcohol-related death compared to those in less deprived areas (Scottish Executive, 2003). There is also an increasing prevalence of acute hospital in-patient admissions with alcohol diagnosis. This is the same in people with drug misuse problems. A survey of homeless people in Glasgow shows that 6% had a psychotic disorder, 44% a psychological disorder and 22% reported a long-standing mental illness (Kershaw *et al.*, 2000).

The majority (70%) of prisoners in Scotland do not report drug use in the last month, but 28% do (SPS, 2004). A large percentage of prisoners report problems of anxiety and depression. As a result of high morbidity in the prison population initiatives like an adequate substance misuse and psychiatric assessment process, risk management and through-care service for recently released substance users, suicide risk management and custodial care, positive mental health initiatives and an inclusion policy incorporating addiction, social care, learning skills and employability policies are important interventions that need to be properly evaluated and piloted using standardised methodologies.

There is as yet little recorded information on the prevalence of comorbidity in identified ethnic and culturally distinct groups in Europe. Equally there are only isolated patches of voluntary service initiatives to help people from ethnic minority groups with co-existing substance misuse and mental health problems, and these are usually opportunistic and based on a traditional mainstream approach to health and social care. Further research needs to look at combining anthropological, ethnographic, and health research components in order to help further our knowledge of identifying and supporting ethnic groups with co-morbid conditions.

The study by Gilchrist of female drug users attending a crisis centre, a drop-in and a methadone clinic in Glasgow, found that 71% had a lifetime experience of emotional abuse, 65% had been physically abused with 20% having a history of sexual abuse (Gilchrist, 2002). This study highlights the need to look at prostitution in an objective way and allow us to look at further research to determine the vulnerabilities related to one of the oldest professions in human history.

Determining both diagnoses and client needs are generally informed by a range of epidemiological statistics and service use. However, estimating client-need in such areas as substance misuse and other mental health disorders is difficult, especially with regard to the evaluation of the needs of many vulnerable groups, e.g. ethnic minorities, refugees, homeless, and other transient/itinerant and marginalised populations. They are 'hard to get at' groups who shun both researchers and would-be service providers.

Greater thought needs to be given as how to fill these gaps in knowledge and relevant methods disseminated.

Objective definitions of need are required, both from the view-point of those providing services and particularly those in receipt of them. With agreement on these basics, integrated programmes for both individual and communities can be developed and implemented. The greater availability of substance misusers' perspectives on comorbidity should facilitate a better understanding of the intricacies of the social foundations of the phenomenon.

Problems with treatment and service models

Thus far, research suggests that there is unlikely to be a single underlying causal mechanism for substance misuse and other mental disorders. This means that approaches to intervention, care and treatment should consider the different dimensions relevant to any specific population or individual.

There are a number of different models of care operating in Europe for those with co-morbid related problems. Services are provided in a range of care settings from community to primary care to specialist mental health services. Services are either provided through the National Health Service, Local Council (e.g. Social Work, Criminal Justice, Housing) and/or voluntary organisations. The National Treatment Agency (NTA) guidance on models of care provides the treatment framework and process with the aim of moving towards a consensus about the essential components of an effective service for individuals with increasing severity of need to increasing level of specialism and conceptualised care (NTA, 2002).

It is important to appreciate that models of care for co-morbid individuals develop in a context of current service models and structures provided that minimum standards for quality are established (Lowe and Abou-Saleh 2004). Such models of care are not robustly researched and an assumption is made that they are generalisable and culturally transferable. Further research should be looking at the different components of this tiered structure and its potential impact of trying to understand complex problems related to human behaviour with simplistic compartmentalised frameworks. The tiers include:

1. Community and social support (e.g. concepts like mental health 'first aid', encouraging family and other community supports to get involved in understanding and empowering the individual's co-morbid problem in working through his/her problems).
2. Generic services (e.g. schools, police, general practitioners, social workers, Accident & Emergency).
3. Generic services with some specialised function (e.g. workers in the voluntary and statutory sectors who specialise in either mental health or substance misuse services). An example is the Community Mental Health Team (CMHT) within the mental health services.
4. Specialist services community addiction team.
5. Highly specialised treatment resources.

Different healthcare systems need to develop their own local practice guidelines based on the best available international evidence. Strategies need to be developed and put in place for the effective dissemination and implementation of such guidelines. It is possible that some information is available in non-English literature that needs to be translated to facilitate diffusion. Many obstacles still remain to be overcome (clinical, ethical, financial and political) before such guidelines are a common feature of healthcare systems across Europe.

As more research on comorbidity becomes available. Especially in terms of understanding its mechanisms, the management and treatment of the phenomenon will be impacted. Integration of knowledge is both highly desirable, possible and urgently needed.

There is an increasing awareness of the need to properly evaluate treatment strategies both for substance misusers generally and, more recently, those with other co-existing mental disorders. Adequately funded research in this area will allow providers to develop services that deliver effective interventions which are sensible and efficient in terms of funding and resourcing. Professional practice should be further examined, clinical audits and service research undertaken so as to further inform refinement of evidence-based developments. There is a need to know exactly what works, in what ways, when, and for whom.

Conclusions

There is still little known about the epidemiological components of this subject because data is either recorded in isolation or not at all. There is a need for more European research in this area, using standardised approaches, methods and data collection instruments.

Little is known about the precise nature of comorbidity in vulnerable groups such as individuals from different ethnic backgrounds, exhibiting learning disabilities, exhibiting chronic pain and/or utilising non-mainstream services such as prisoners, prostitutes and the homeless. Even gender-specific aetiological and epidemiological factors are poorly understood; this has implications for service provision and treatment.

Cross-fertilisation of research into the epidemiological nature of the comorbidity phenomenon across disciplines and countries; as well as the sharing of best practice in research and assessment techniques, models of service provision and treatment are hindered by a lack of knowledge on the part of key stakeholders.

The separation of different approaches to the phenomena of substance and other mental disorders occurred not only in terms of research but also service financing and provisions as well as treatments. This philosophical dichotomy has prevented a holistic or integrated approach to dealing with the issue of co-existing mental disorders or multi-morbidities. The situation has been

improving over the last decade. However, it may not always be feasible to implement such an approach without fundamentally changing the healthcare systems in the areas concerned.

Differences in the definition of the phenomenon of comorbidity, as between the social and medical, can lead to misunderstandings in respect of the treatment criteria for substance misusers. These differences need to be reconciled.

Lack of familiarity with the DSM, ICD or other criteria for classifying mental disorders and substance abuse disorders on the part of the clinician at the initial assessment of a patient may lead to premature closure about the presence of either type of problem. Another pitfall to avoid in the assessment stage is to presume the primacy of either the psychiatric or the substance abuse disorder. Treatment should be concurrent for both disorders. All syndromes present should be identified and treated.

Oyefeso (2002) points out that it is increasingly becoming customary for substance misuse and mental health professionals to define the dominance of a disorder in terms of the first treatment episode or agency of first presentation, substance misuse service or mental health team. This further reinforces the need for clear and unambiguous classification methods that share a broad consensus of support and application. There are implications too for care; reluctance on the part of one system or the other to take lead responsibility increases the risk of clients "falling between the cracks".

Patients experiencing transient psychiatric symptoms clearly associated with intoxication or withdrawal would not receive a dual diagnosis, whereas those with a well-documented history of both a major mental illness and substance dependence would be clearly given a dual diagnosis. Where decision-making becomes more problematic for the clinician is when they have to consider less definitive or more chronic levels of these two types of disorder (Lehman *et al.*, 1989). When assessing and classifying what long-term treatment(s) may be relevant during the period of maintenance or rehabilitation, a key question that has to be answered is whether a patient's disorders have a hierarchical structure and what factors contribute to the long-term risk of re-occurrence.

Some psychotic disorders create needs on the part of relatives, carers and mental health professionals for urgent treatment and assistance. The problems in getting such help can be aggravated by services for substance use and mental illness being administratively separate, and often having markedly different treatment philosophies and cultures/approaches.

The characteristics of a disorder under examination may be mistaken for those that are caused by an ignored comorbid condition if the possibility of comorbidity is not taken into account when studying individual mental disorders (Kessler 1995). Therefore, it is essential to have a considered assessment process that ensures patients' needs are accurately identified and prevents inappropriate treatment responses (Franey and Quirk, 1996). A detailed psychiatric and substance use history with corroborative information

from a client's relations and care staff and from laboratory tests is the approach recommended by Crome (1996).

Important occasions for prevention may be provided through understanding why different disorders co-occur. Toneatto *et al* (2003) argue that there is a need for a better characterisation of the phenomenological heterogeneity of psychiatric comorbidity among treatment-seeking substance abusers. Such knowledge may be significant, it is suggested, in the assessment of substance abuse and psychiatric symptoms, planning of treatment, evaluating prognosis, and preventing relapse.

There is often a poorer treatment response from individuals with co-morbid mental disorders and such persons experience a worse course of illness over time (Kessler, 1995). They generate larger social costs because they are more impaired and experience increased social disability. Those who suffer from both substance use and mental disorders have a poorer outcome than those with a single disorder.

There are important implications for treatment when comorbidity is present. The treatment of one symptom may alleviate those of another condition. Having one disorder may worsen the symptoms and course of the other disorder even where there is no causal relationship between the two, e.g. alcohol dependence and an affective disorder.

Attitudes towards comorbidity by service providers are still a barrier to adequate and equitable care. This is partially related to lack of training and experience and associated anxieties to this needy population, but also due to the philosophical approach of identifying a co-morbid individual as someone who 'brought' the problem on to him/herself.

The evidence behind what works is still lacking. An evidence-based biopsychosocial treatment model is a logical next step in comorbidity research.

There is still a lack of communication between different agencies in the community that would help provide a synergistic approach to the care of co-morbid individuals.

The role of specialist teams and the importance of a systemic approach to care with the opportunity to replicate good practice are not possible. This is due to commissioners and practitioners alike being unable to identify clear priorities and plan accordingly in the context of (a) rapidly changing National Health Service(s), with a multitude of important priorities, competing for limited resources.

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Chapter 20 Comorbidity: toward a European evidence-base

C-L Hodges

What is the extent of the problem?

There has been increasing recognition across Europe of the extent of co-morbid mental health and substance misuse issues in recent years. This is reflected both in legislation and policy initiatives affecting service delivery. In the UK, in particular, guidance now specifically addresses issues associated with comorbidity, albeit focusing on problems at the more severe end of the spectrum.

Whilst the vulnerability associated with combined substance misuse and mental health problems is well established (Drake and Wallach, 1989; Lehman *et al.*, 1993) and the need for tailored service delivery is acknowledged (Crawford and Crome, 2001), few studies address particular co-morbid characteristics, needs, or treatment specifically. This oversight results from several difficulties.

Comorbidity or dual diagnosis is defined in different ways, and people affected in such ways have, in reality, several vulnerabilities, with these having consequences on multiple levels. In addition to the mental and substance use problem(s), many are heavy users of medical services generally, are more likely to offend and experience imprisonment, have histories of childhood or adolescent trauma, social skill deficits and housing problems (Koegel and Burnam, 1988; Tessler and Dennis, 1989; Fischer and Breakey, 1991; Cuffel and Chase, 1994; Odell and Commander, 2000; Reynolds *et al.*, 2004).

A lack of consensus regarding the aetiology of co-morbid mental health and substance misuse potentially makes recognition of these complex problems both challenging and inconsistent. Despite its frequency of occurrence, comorbidity remains poorly understood and is frequently missed as a diagnosis among mental health and workers in the substance misuse field (Johnson *et al.*, 2001). This failure to recognise a complex and demanding (and possibly costly) sub-set of service users may in part explain why these individuals have notoriously poor treatment outcomes, and find it difficult to access appropriate treatment facilities.

Because many psychiatric and substance misuse instruments remain largely unvalidated for use with co-morbid individuals, case assessment depends on pre-established procedures (Lovell and Shern, 1990) although the drive to develop comorbidity toolkits is gaining momentum (e.g. Rethink and Turning Point, 2004). Research efforts are further hampered by the disorder-specific organisation of services. Service systems tend to view clients in corresponding uni-dimensional terms (i.e. as mentally ill or substance dependent), despite the complicated realities of co-occurrence (Ridgely *et al.*, 1990).

Co-morbid or dually diagnosed individuals are thus seemingly an extremely heterogeneous group of people (Lehman *et al.*, 1989). This heterogeneity includes demographics, pathways to co-morbidity, type and severity of mental disorder, and type and pattern of substance use problem(s). All of these issues are believed to make generalisations about the dually diagnosed population difficult.

Addressing co-morbid mental health and substance misuse problems forces us to confront a range of issues: clinical, service system, legal, housing, social and psychological ones. This chapter explores the European climate in relation to co-morbid mental health and substance misuse, examines prevailing policies and places comorbidity in a wider European context, presents new evidence and then suggests directions for future research efforts that may contribute to a more European evidence base. Inevitably the structure of this chapter is tailored more closely to policy perspectives and terminology relevant and familiar to the UK context but analysed in a wider European perspective.

Genesis of the task

Increased interest in the nature of co-morbid mental health and substance misuse has been fuelled, in part, by research regarding the pervasiveness of the phenomenon. Concurrent with the research advancing our knowledge and scope of the comorbidity problem, a second generation of research efforts has been undertaken which shed more light on the aetiology and clinical nature of co-morbid problems. Further studies have also explored the effectiveness and efficacy of treatment interventions for individuals presenting with complex comorbid complaints. So what's the problem? The studies are primarily non-European being carried out in the U.S. and Australia. European studies largely, but not only, tend to be English-based.

Comorbidity is equally rarely explicitly referred to in European health or social policy and there are few guidelines for the management of comorbidity in current services. However, the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) and the World Health Organisation have been collaborating over the last few years to raise awareness of the veiled problem of comorbidity in Europe (WHO 2001a and b, 2002). The EMCDDA included a special section on comorbidity in its annual report for 2004 and issued a policy briefing on the subject in the 20 official EU languages and Norwegian (EMCDDA 2004, 2005). (See Chapter 21 for more details.)

It was in 1998, when the UK's Anti-drugs Co-ordinator published the White Paper, *Tackling Drugs to Build a Better Britain* (Home Office, 1998), that comorbidity as a concept was recognised across the UK (Barker, 1999). Until 1999 UK mental health policy did not recognise comorbidity. The radical policy shift in mental healthcare in *Modernising Mental Health Services* (DH, 1998) omitted to deal with comorbidity despite emerging evidence of its existence in UK services during the 1990s. However, with the development of the *National Service Framework for Mental Health* (DH, 1999), comorbidity

was both recognised and addressed in several standards of care. These were followed by the Department of Health's *Dual Diagnosis Good Practice Guide* (DH, 2002).

In Scotland, the report from the joint working group between the Scottish Advisory Committee on Drug Misuse (SACDM) and the Scottish Advisory Committee on Alcohol Misuse (SACAM) *Mind the Gaps: Meeting the Needs of People with Co-occurring Substance Misuse and Mental Health Problems* (SACDM & SACAM 2003) was published by the Scottish Executive in order to make recommendations to commissioners for both substance misuse and mental health services to make sense of the complex nature of comorbidity across Scotland.

This document is part of a comprehensive programme of evidence-based research to understand different issues which are very closely related in trying to apply current international knowledge to commissioned Scottish-based research which will ultimately inform future Scottish drug and alcohol policies. Such activities include a Confidential Inquiry into all drug-related deaths in 2003 in Scotland (Zador *et al.*, 2005), understanding injecting patterns and risk in a drug dependent population, understanding the evidence behind treatment effectiveness and outcomes, provision of services for young people and the evidence behind rehabilitation (community and in-patient) programmes (EIU, 2002a, b, 2004). It is within this context that comorbidity was seen as another important issue to be looked at in order to help understand what the associated problems are within a Scottish framework so as to then help apply effective interventions.

As is noted elsewhere in this monograph, there are many similarities between countries' drug and mental health policies. However, consistent policy on comorbidity is lacking in most European countries. Each country has a unique historical perspective, which has led to varying policies and legislation and different patterns of service delivery. There has been the adoption of normalisation, with a move towards deinstitutionalisation, integration and inclusion. However, the pace of this change varies between and even within countries. The variety of laws and policies in place for mental health and substance misuse issues at both the national and local levels makes it difficult to paint a seamless picture of the European situation in relation to comorbidity.

Individual responsibility versus treatment focus

Mental health and substance misuse services have traditionally evolved separately in many countries, with policy clearly reflecting this. Service users in mental health settings have had to possess the requisite motivation to enter treatment services and maintain appointments as a predictor of treatment success. More recently, and in recognition that many people with severe mental health issues are unwilling or unable to use traditional community-based services, the mental health field has emphasised the role of case management and intensive outreach programmes. Case management and

intensive outreach can help to engage, link, and support patients in needed community services. They are intended to help reduce the negative consequences to the individual of 'falling between the cracks' by ensuring continuity following engagement in treatment. In principle, when a service user becomes resistant to care and treatment, a key-worker assumes the responsibility for identifying a more appropriate route to motivating the service user to enter treatment. This activity might be seen as 'enabling' by traditional substance misuse treatment personnel.

In contrast, substance misuse services focus on individual responsibility, including the responsibility of accepting help. Motivation for recovery is enhanced through confrontation of the adverse consequences of substance misuse. Therapeutic interventions involve diminishing the individual's denial about the presence and severity of the substance misuse problem. Where the will to change and engage in treatment remains absent, many service users simply would drop out of the system. Mental health practitioners might regard this situation as an abandonment of the most needy. However, more recently, the addiction treatment system has been developing case management models to better address treatment-resistant patients.

These philosophical and professional silos militate against cohesive, holistic service provision and practice and calls for increased attention to better joint working arrangements and other relevant collaborative efforts. However, it is important to note that the use, integration or effectiveness of any model of service provision is not determined by any one factor. The organisation of health and social care systems, legislation, policy on provision of services, professional development and education of healthcare and substance misuse staff all contribute to what model is applied. Models also differ between and within countries and treatment approaches do not necessarily fit into a single model. Further, owing to the fact that much of the legal guidance and frameworks for practice in relation to comorbidity is either non-existent or narrowly focused on the more severe end of the problem spectrum, service provision is likely to remain reactive rather than proactive.

Integrated treatment

An integrated treatment approach is the method receiving the most contemporary attention and is frequently heralded as the model of excellence (SAMSHA 1997, 2002; Mueser *et al.*, 1998; DH, 2002). Integrated treatment refers to the simultaneous treatment of all problems associated with comorbidity by appropriately trained practitioners or a cross-trained treatment team whose members are competent to treat both substance misuse and mental health problems. However, fragmentation and traditional trajectories within and between services make achieving such harmonious working arrangements problematic at the national level let alone the international level.

As comorbidity is a relatively recent concept in many European countries, the notion of such joint working or the share of care reflected in policy is still emerging (EMCDDA, 2003). Indeed, the EMCDDA's most recent annual

report highlights the difficulty associated in achieving Europe-wide integration of treatment services (EMCDDA, 2004, 2005). In practice different models of care often co-exist with little being known about what actually works and for whom (Drake *et al.*, 1998). Furthermore, no standard instrument exists for describing social and health care systems and pathways through care for people with comorbidities thus allowing comparisons between systems in different arrears or in different national contexts difficult. In response to this, the EMCDDA emphasises the need to evaluate the different treatment structures and service provision across European countries, to allow practice to be underpinned by sound evidence.

Service delivery infrastructures often cannot respond to geographical dispersal of the client group and, added to the lack of specialised training opportunities for staff problems in continuity of care with other health providers as well as stigmatisation issues in the wider community, further challenge an already fragmented service provision to this population.

Does a comprehensive European evidence-base exist for the treatment of comorbidity?

The succinct response to this is 'No'. There are reports of comorbidity, its prevalence and incidence in many European countries (EMCDDA, 2004), but until recently there was no internationally standardised approach to data collection or to specifying the range and volume of services available for people with co-morbid mental health and substance misuse problems, let alone research on treatment effectiveness (though see Moggi *et al.*, 1999 for information on comorbidity treatment in Switzerland and the EMCDDA website for information on four on-going comorbidity treatment research programmes in the Netherlands). In 2002 the E.U. funded a project (Integrated Services Aimed at Dual Diagnosis and Optimal Recovery from Addiction - ISADORA) to look at variations in comorbidity in seven European settings across six E.U. countries (Denmark, England, Finland, France, Poland and Scotland). The objectives of the study were to describe service provision for comorbid service users and to compare morbidity and service use for these patients across the participating sites. A further aim was to map the pattern and distribution of severe psychiatric illness and addiction and to examine the risk factors for subgroups in the samples.

The publication of the final report is pending, though the emerging message appears to be that providers who are equipped with an appropriate knowledge-base, take time, listen, respond equitably and engage the service user, elicit more favourable responses and entries to treatment and care. However, co-morbid service users in many instances experienced a very ad hoc service response. There was a general lack of awareness concerning available services and routes of access. There were concerns that signs and symptoms were focused upon rather than needs being looked at holistically. The direct involvement of more agency workers with the service user appears to work well for some but is not necessarily always a better package of care

and the lack of dedicated dually-trained staff was considered by service users to be hugely problematic.

Service users were particularly critical of mental health services (in particular in-patient facilities) inability to address drugs and alcohol problems alongside presented mental health issues. They related how mental health services do not routinely address substance use and therefore are not helping service users address the duality of presenting problems. Related to this complaint, service users also felt excluded from services because of behaviour linked to drinking or drug taking where they actually need help and support for these behaviours rather than rejection. Some service users were positive about the quality of the help provided by specific individuals within either mental health or substance use services.

Having separate service delivery systems and separate national institutions and government departments funding research on substance misuse and mental health problems has historically fostered the division of mental health and substance misuse research. Opponents of research that simultaneously explores substance misuse and mental health problems may criticise such research for the lack of homogeneity and thus the ability to offer sound control cohorts. However, there remains the distinct possibility that *different* individuals with the *same* set of comorbid problems are more alike than *different* individuals with *either* a substance misuse *or* a mental health problem (Onken *et al.*, 1997). Instead, knowledge about patients who share the label 'co-morbid' but are found in different treatment sectors should inform service and policy development, where differences across systems should provide support for separate treatment systems and similarities should indicate the value of integrated or specialist service provision.

Further research on the epidemiology, aetiology and treatment of people with comorbidity still holds promise for an improved evidence-base in the inter-relationships between mental health and substance misuse problems. Thus far, research in this area is limited. Nevertheless, the EMCDDA's recently published report on the state of the drugs situation across the EU contains some information on the current efforts in regard to comorbidity (EMCDDA, 2004). Whilst the findings cannot be viewed as definitive, they do offer a snapshot of current activities and some documented insight to the complexity of the comorbid situation across Europe.

The evidence to guide services in providing effective and efficient care for people with comorbidity is growing but remains limited. Between services it is likely that a lot of this evidence is being applied, although where there is lack of communication, liaison, agreement and co-ordination of care, practice can be compromised. Treatment is being duplicated; some treatment effective in treating one condition needs to be altered when dealing with comorbidity. Assessment methods are different for one condition or two parallel conditions than for comorbidity. Many areas in Europe do not yet have any accurate indication of the extent of comorbidity, which adds to the complexity of organising effective and efficient services.

The remaining part of this chapter extends current international evidence regarding comorbidity to a Scottish context by reporting on the nature and scope of existing service provision in Scotland for people with co-existing mental health and substance use problems. This Scottish Executive commissioned study identifies current issues related to the subject of comorbidity in Scotland using a multi-faceted approach.

An example of research-based evidence: comorbid mental health and substance misuse problems in Scotland

As mentioned above, the report from the joint working group of the Scottish Advisory Committee on Drug Misuse (SACDM) and the Scottish Advisory Committee on Alcohol Misuse (SACAM) “Mind the Gaps: Meeting the Needs of People with Co-occurring Substance Misuse and Mental Health Problems” was published by the Scottish Executive in order to make recommendations to commissioners of both substance misuse and mental health services to make sense of the complex nature of such comorbidity (SACDM & SACAM 2003).

Aims and objectives

The main aim of the study was to identify key issues from adult service users', providers' and commissioners' perspectives that can inform the development of the comorbidity agenda in Scotland. The research addressed commissioning staff and service provider perspectives on mental health and substance misuse, what they believe is working and what they would do to improve experiences and care pathways for service users. This exercise also served to identify how specialist services relate to other key organisations and agencies and to examine the capacity of services and any unmet needs of different groups among co-morbid individuals. Service users' perceptions of the services they have utilised, their expectations and experiences were also established and afforded the project a unique perspective.

Methods

The principal methods of data collection included in-depth, semi-structured face-to-face interviews with 38 service users and 26 commissioners and focus group discussions with 90 service providers directly delivering interventions to service users. The study covered different sites across Aberdeen, the Borders, Edinburgh, Glasgow, Fife, Forth Valley and Tayside. The narratives were explored using Framework Analysis (Ritchie and Spencer, 1994); a type of thematic analysis specifically developed for the public sector.

Commissioners: Commissioners were selected based on their senior managerial positions in regard to planning and commissioning responsibilities for their respective service sectors. These included Directors of Social Services, Public Health Physicians, Drug and Alcohol Action Team co-ordinators and Lead Officers in Mental Health.

Interviews focused on gaining an account of commissioners' broad views of issues relating to comorbidity and explored specific features of relevant policy and practice.

Providers: The providers consisted of a cohort of participants from diverse backgrounds who may have primary contact with co-morbid individuals, for example addiction services or mental health services, or secondary contact, such as homeless associations and housing agencies.

The discussions were conducted in relation to real co-morbid case histories in the form of vignettes. The vignettes comprised different mental health and substance misuse combinations frequently encountered including: depression/anxiety and alcohol misuse and possible schizophrenia and cannabis use. The focus group topics included issues around practice and policy, assessment, treatment interventions and wider organisational issues.

Service users: The sample of 38 respondents included more males (30) than females (8), similar numbers across different age-groups, a spread of co-morbid combinations, some people with complex personal and social situations and some respondents with less severe issues.

Interviews were based around service users' experiences and perceptions of service provision in relation to their mental health and/or substance misuse problems. The interviews provided insight to the different ways of accessing services, the types of treatment received, helpful and limiting experiences and what might be better provided in the future.

Findings

Accessibility and availability

Signposting: The degree to which services are advertised and the level of knowledge regarding the nature, remit and limitations of services is insufficient to successfully guide the service user either to or through the service maze. Booklets and pamphlets are quickly out of date and often appear or are available only in a limited number of facilities, most notably in general health facilities. In the absence of a 'live' and regularly updated directory of service remit and availability, providers are likely to continue to rely on historical linkages to services rather than on what is actually available.

Structural obstacles: Primarily, the structure of existing services and their service philosophies were considered by many as creating barriers for co-morbid service users who may need input from a number of different service providers. Reports suggested that traditional trajectories rather than client-centred thinking often influenced decision-making about approaches to service users. As a result, there were debates between services as to who should take responsibility for service users with different presenting problems.

Who manages mild to moderate mental health problems in substance misusers? Individuals with substance misuse related issues often do not have

sufficiently severe mental health problems to be eligible for attention from Community Mental Health Teams which prioritise severe and enduring mental illness. The majority with mild to moderate mental health issues are then sometimes inappropriately managed by substance misuse agencies or by primary care services.

Who manages mild to moderate substance misuse problems in those with mental health problems? Similarly, individuals who use substances (such as cannabis) that are commonly thought to be relatively innocuous often do not qualify for eligibility to substance misuse services which concentrate largely on opiates and other injectable drugs. This service configuration creates obvious gaps in provision for people who need help for both substance use and mental health issues.

Particular tensions

Accommodation: Positive experiences were reported in relation to supported accommodation, though the availability of such living arrangements is scarce and often restricted to those who do not use substances.

Contentions between drugs misuse and alcohol: Many of the respondents, commissioners and providers included, expressed dismay and frustration over the ways in which generally more money and other resources were made available for drug misuse compared to alcohol.

Specialist provision: Frustrations were especially expressed at how difficult it was to access specialist help in a crisis. It is the responsiveness of the 'system' to the needs of a group of people with multiple needs that is challenging for all concerned.

Service characteristics

The need for flexibility and consistency: The research highlighted a contrast between the inflexibility of services compared to the chaotic characteristics of co-morbid service users' lives, and their highly individualised health and social care needs. The narratives described how people living with mental health and substance use problems have ordinary life goals such as obtaining work, forming meaningful relationships, and generally improving the quality of their lives, but the services set up to support their recovery are heavily medicalised and not sufficiently flexible or appropriate to the needs of this group, concentrating largely on 'diagnosis' and neglecting wider needs.

The need for responsiveness and continuity: Providers and users alike described how when a service user asks for help they need it immediately, rather than finding themselves on a waiting list and being told to come back a later stage. Equally, throughout the research project there was a general feeling expressed that after formal treatment had ended service users were often isolated and cut off from appropriate services. This seems especially so when service users leave a hospital environment, where no-one appears to be 'in charge' of that person to help them access further support services to

address their total need. There is thus a clear need for case managers or co-ordinators.

The need for strengthening psychotherapeutic approaches: The most effective interventions considered centred on the value of warm, friendly, empowering services usually provided by one individual on a continuous basis. For this reason concern was expressed at the relative lack of psychotherapeutic interventions available and the consequent lack of opportunity to develop trusting, therapeutic relationships with one person.

The need for holistic care: Whilst there are examples of good practice and many positive experiences of different therapeutic relations, many interviewees, service users, commissioners and providers alike, commented with regret that several services did not tend to treat problems holistically and in a joined-up manner, but continued to approach mental health and substance misuse issues in relative isolation from one another and more consistent with a sequential approach.

Service organisation

The need for specialists: There is a lack of dedicated comorbidity specialists who both appreciate the interaction of substance misuse and mental health problems and who have the expertise and the resources to undertake this work. Both service users and providers identified the possible benefits of such specialists either embedded within mainstream substance misuse or mental health teams, or in specialist units.

The need for training to underpin provision: Service providers identified that they needed specific training and support relevant to dealing with the complexities co-morbid individuals bring to the services, or at a minimum, to have access to workers who do have the knowledge and expertise of supporting people with co-morbid issues.

Multi-agency partnerships: In many parts of Scotland, health services and local authorities are working together and share funds, yet evidence of joint working remains patchy. Where it does exist, experiences were positive. There was evidence to suggest that the operationalisation of joint working is envisaged differently across the researched localities. Whilst multiple engagements were viewed as inevitable, limits to the number and complexity of arrangements need to be put in place. For some, more informal inter-sectoral agreements remained more realistic. For others, change in infrastructure, in terms of co-terminous partnerships between health, social and non-statutory sectors was viewed more favourably than implementing service change per se.

Shared assessment protocols and development of care pathways: As a result of patchy joint working arrangements, shared assessments and the creation of care pathways for co-morbid individuals are lacking or under-developed in several locations. Again, there was some controversy regarding the usefulness of uniform integrated care pathways for such a heterogeneous

group of people with quickly changing but on-going needs. The requirement for approval for joint-funding, as evidenced from discussions with commissioners, in creating a care package was believed to enable closer collaborative efforts between health and social care.

Bureaucratic quagmire: Providers and commissioners voiced concern over the expediency of policy and directional changes and associated changes in remit. These structural and procedural modifications were believed to act as barriers to developing functional and successful collaborative efforts and to consistency in care and support. The volume of information and guidelines to wade through equally raised concern and the relevance of these to local contexts was also questioned, especially in relation to rural areas.

Exclusion: Service users felt excluded from decisions about their care and wanted greater involvement and empowerment. Many providers and commissioners considered that, though service users were often listened to during formal meetings, this was simple lip-service as this was followed by little action at the planning level. Notwithstanding the importance of user involvement, there was also the opinion voiced that service users are not necessarily best placed or the most informed to direct and advise on service provision and practice. Service users interviewed also stressed their need for peer support groups.

Stigma and inclusion: All of the participants spoke of aspects of wider cultural and social problems that need addressing. Stigma is an enduring feature of mental health and substance misuse problems alike and since the New Labour Government of the late 1990s there has been a marked policy shift towards recognising the importance of social inclusion. However, while the structures within which care and support is provided have changed for many, the language of the various professional silos and the theory that underpins them frequently remains the same.

Implications

The picture that emerges from this study is one of a group of people who struggle daily with the realities of living with co-morbid mental health and substance misuse problems and for whom existing support services have often been inappropriate, inadequate and which may further undermine their already fragile self-esteem and coping strategies. The complexity of severe mental health problems and misuse of drugs or alcohol frequently conspire to erode life opportunities. The lives of service users were characterised by a series of losses: loss of a routine life; loss of social networks, including loss of friends and family; loss or inability to obtain employment; and loss of financial security.

There are examples of good practice. However, the themes identified are lack of awareness of available help, lack of clarity about pathways for help, and a lack of on-going support. How professional roles and responsibilities within a particular socio-cultural context impinge on responses to the co-morbid client is still poorly understood, as are the reasons, causes, consequences and

evidence-based treatment interventions for this group. What is clear is that there are considerable training needs across all professional groups and agencies.

Service users were generally considered by providers to lead 'chaotic' lives with a multiplicity of problems jostling for attention. Services for co-morbid individuals were varied in number and in quality across the different research localities. With notable exceptions, the care that services provided was unsatisfactory and inadequate. Exceptionally, key individuals established a therapeutic relationship with service users within a holistic framework, regardless of the primary 'diagnosis' or 'diagnoses'. This applied to both statutory and non-statutory service provision.

Commissioners remained undecided whether following the national guidance to implement services was ideal. Together with service providers they were, however, unanimously agreed that specialist staff should be based within mainstream mental health and/or substance misuse services and not necessarily reside in stand-alone specialist comorbidity teams. The demand was for specialist mental health and substance misuse competencies provided by a number of practitioners and greater general awareness for all staff working in these services.

Training and information is required for service users, carers, service providers, commissioners and the general public in order to contribute to a greater understanding of combined mental health and substance use issues and to engender attitude change.

The overall conclusion of this project is that the human and economic cost to people with substance problems and mental health difficulties, to the wider community and to health and social services, is incalculable. A planned prioritised response can augment clinical, service, training and research agenda.

Evaluating effectiveness

Across the UK, the drive for harmonisation in the quality and availability of services is monitored through a number of national performance management processes. The National Service Framework for mental health places great emphasis on monitoring standards across the whole mental health system. The development and implementation of services should therefore reflect the influence of national standards for different elements of the service as a whole, and from the perspectives of different stakeholders. Performance indicators based on national standards and targets should indicate the extent to which services are complying with the current goals and milestones. It does not necessarily follow that all services that successfully meet the Government's goals are inevitably delivering high quality outcomes to the people that actually use these services, not least from the perspective of service recipients themselves. In other words; a tick-box culture does not allow contextual factors to be taken into account (Langan and Lindow, 2004).

For example, a Norwegian study (Bjørngaard *et al.*, 2004) exploring similarities between clinical practice in Community Mental Health Centres (CMHCs) and guideline recommendations for schizophrenic disorders found significant gaps between the evidence-based recommended interventions and the every-day clinical practice. Whilst evidence-based clinical guidelines are mainly based on efficacy trials with manualised interventions on selected homogenous groups of patients, the mental health services provided were predominately anti-psychotic medication, supportive psychotherapy and psychosocial rehabilitation. Few received structured cognitive behaviour therapy or family interventions. The authors therefore question the external validity and the applicability of such guidelines for routine clinical care.

This raises questions about what performance indicators actually indicate, what the measures of successful services should be and how these measures should be arrived at. More importantly there should be consideration about what different stakeholders (e.g. purchasers, providers, users, their families and the wider community) consider appropriate measures of performance and the extent to which these different perspectives coincide.

How can the roll out of national policies be monitored? Aside from the Scottish research example, described above, another method has been pioneered by the Centre for Public Mental Health at the University of Durham which runs the annual national Adult Mental Health Service Mapping for the Department of Health in England and Wales. This project forms part of the annual monitoring of the progress in implementing the UK National Service Framework for Mental Health. It is used in Trust ratings and as one of the Departments primary sources of information about local mental health services.

Services are classified into 56 types, from acute in-patient wards to low threshold drop-in centres. Information collected about each individual service varies, though in the case of Assertive Outreach and Crisis Resolution Teams, services often utilised by co-morbid individuals, fidelity to prescribed service models is key. This monitoring method may be a starting point in establishing policy related progress in mental health and substance misuse provision over time.

Whilst organisational rearrangements and realignments both structurally and procedurally aid in over-coming some of the barriers to evidence use, Nutley *et al.* (2002) highlight the importance of individual, personal commitment and effectiveness as fundamental to the development of a truly evidence-based policy and practice culture in relation to substance misuse. This notion is extendable across many public services and, given the dearth and disparity of current evidence, seems particularly salient for the development of the 'newly arisen' comorbidity agenda.

Conclusions

The co-morbid population is becoming a focus of attention for all service providers owing to the suggested increase in numbers of service users with these dual diagnoses and the observed negative effects on users and costs to services. Having a diagnosis of both substance misuse and a mental health problem is associated with increased rates of homelessness, imprisonment, volatile behaviour, suicide, premature death and an increased use of emergency psychiatric hospital admission and other services. The complexity of a co-morbid individual's needs and the additional challenges they face in obtaining appropriate treatment suggests that an exploration of employment and housing needs as well as inter-personal relations and self-adjustment needs seems warranted.

The importance of partnership has been stressed in a succession of professional guidance documents, but there remain considerable bureaucratic, organisational, and historical barriers that must be overcome. Effective service models that exist in the UK and elsewhere are a source of ideas to stimulate appropriate, person-centred developments. Overall the need for a fresh impetus is emphasised, in which new partnerships are formed, and collaborative services are developed and evaluated. In this way future initiatives can be based upon evidence of clinical and cost effectiveness (Redfern and Christian, 2003).

Despite legislation to harmonise mental health practice throughout Europe and convergence in systems of training there remains an extraordinary diversity in mental health practice in Europe with statistics on psychiatric morbidity affected by different approaches to diagnosis and treatment of psychiatric disorders. Approaches to tackling substance misuse also vary among nations and attitudes towards substance misuse and mental illness also show definite international differences.

Whilst mental health services are organised and financed in very different ways across Europe there are nevertheless a number of common trends and issues. The most obvious trend has been the run-down of psychiatric beds particularly in the large mental hospitals and this in its turn has given rise to the problem of providing alternative services. Throughout Europe people are striving, with mixed success, to establish new services that are community-orientated, provide reasonable levels of clinical care with some continuity and co-ordination, and ensure that the individuals served have appropriate accommodation and day-time activities. While there are some excellent services, there are even more services throughout Europe struggling to solve common problems.

There is a need for researchers and policy makers in the area of co-morbid mental health and substance misuse to collaborate and develop shared methods of approach to research. Although much is known about the prevalence and multiple needs of co-morbid individuals, there are a number of research questions that remain. If future research is to be profitable and effectively underpin policy and practice, methods need to be valid and findings

reliable. By collaborating with colleagues in other countries, engendering cross-fertilisation of ideas, it should become clearer whether existing findings are of a global nature, or dependent upon the structures and systems in which they were found. Similarly, while previous research highlighted the basic needs of co-morbid individuals, future research should concentrate on factors that may help prevent the 'ping-pong' or 'revolving door' effect, resulting in co-morbid people being bounced around various organisations and agencies, most notably among mental health and substance misuse services.

Finally, research conducted to date has largely concentrated on clinical questions, questions that are often epidemiological in nature. More attention should be paid to research at either end of the science- and social-research spectrum, namely neuro-biological and wider social factors, in particular study into preventative mechanisms and a sharper focus on vulnerable and minority groups.

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Chapter 21 Comorbidity - developing a European perspective

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Background

This article is based on the information collected from REITOX National Focal Points for the Selected Issue 'Co-morbidity of the EMCDDA Annual Report 2004 (EMCDDA, 2004a), and the EMCDDA Drugs in Focus Publication 'Co-morbidity – an underestimated condition' (EMCDDA, 2004b) as well as material collected by the EMCDDA as part of its ongoing work to report on the European drug problem.

The EMCDDA coordinates a network of [National focal points](#) set up in the 25 EU Member States and Norway, and the [European Commission](#). Together, these information collection and exchange points form REITOX, the European Information Network on Drugs and Drug Addiction. This network acts as an instrument for the collection and exchange of data and information. When no other sources are given, the origin of national information is the national reports of the REITOX National focal points. These reports are available at: <http://www.emcdda.eu.int/index.cfm?fuseaction=public.Content&nNodeID=435&sLanguageISO=EN>.

For the purposes of this review, the World Health Organisation (WHO) definition of co-morbidity, or dual diagnosis was adopted that is the 'co-occurrence in the same individual of a psychoactive substance use disorder and another psychiatric disorder' (WHO, 1995). Co-morbidity in this context refers to the temporal coexistence of two or more psychiatric or personality disorders, one of which is problematic substance use.

Introduction

The interest in the co-occurrence of psychiatric illness and substance disorders, commonly termed co-morbidity or dual diagnosis, has gained momentum in Europe in recent years. In research and clinical practice, it has become increasingly evident that problem substance use and mental disorders are intrinsically and complexly linked together and that this has wide-ranging consequences for prevention, reduction of drug-related harm and treatment, as well as for the criminal justice system.

This chapter will focus on the co-morbidity of illegal drug problems and mental disorders in Europe. This is not a new phenomenon, historically drug users have been colloquially referred to as "mad, sad or bad" and the overlapping of mental health problems with problematic drug consumption has always posed a challenge to treatment services. To a large extent services are still inadequately equipped to deal with the diagnostic and treatment needs of this client group, disregarding and/or being incapable of coping with the totality of

the client's problems. In Europe as a whole, psychiatric staff with a medical background often have little knowledge of drug treatment. Similarly, staff at drug treatment facilities may be poorly informed about psychiatric care issues. In clinical practice a co-morbid picture of mental illness with problematic substance use call for different treatment options than the co-morbid picture of problematic substance use and one or several personality disorders. These different points of departure may inhibit the development of a global and integrated understanding of the clients needs. In the worst case, this can result in those with co-existing mental health and drug problems finding their experiencing of treatment resembles a 'revolving door', as they are referred from one service to another while their situation deteriorates.

If the problem of co-morbidity is not new, what is, are advances in both understanding and responding to this condition. Increasing understanding of the biomedical aspects of both drugs' and mental diseases' physiological influence on the brain metabolism as well as developments in social sciences and psychiatry have lead to more refined diagnostic possibilities and new medical and psychosocial treatment approaches. The frustration felt by both psychiatric and drug treatment staff of their limited success with a large and growing number of 'difficult' patients has accelerated to recognition of the need for new treatment routines and the need for a multidisciplinary approach to client care. In tandem with this, mental health problems, which were generally not adequately acknowledged have come higher on the health policy agenda, as for example in the Mental Health Action Plan for Europe, launched by the WHO Regional Office for Europe together with the European Commission in early 2005 (WHO, 2005).

Despite the growing awareness of the need to develop better responses, in Europe as whole, co-morbidity remains both under-estimated, under-diagnosed and often inadequately treated. In fact, to broaden the debate even further it may be more appropriate to talk about multi-morbidity, as those with drug and mental health problems may also be suffering from a range of other illnesses, including problems related to HIV and AIDS infection, or hepatitis C virus (HCV) infection, as well as experiencing social difficulties, such as family problems, unemployment, incarceration or homelessness. Consequently, the successful treatment of any client may require interventions that address a broad set of needs and the failure to successfully respond in one area may undermine the efficacy of therapeutic input elsewhere.

Prevalence of comorbidity

Numerous studies have been carried out to measure the prevalence of psychiatric and personality disorders as well as drug use patterns both among psychiatric patients and drug users in and outside treatment services. The results, in terms of both numbers and diagnoses, vary greatly, depending on population availability and selection, sampling methods, diagnostic skills and competence, the validity, reliability and sensitivity of the diagnostic instruments used and the period of the study. The most recent prevalence study – the American NESARC-study, with interviews of 43,000 persons,

indicated that 48% of persons with a soft diagnosis like 'drug use disorder' also had at least one co-morbid personality disorder compared to 16% among those with an alcohol use disorder (Grant *et al.*, 2004).

Many drug professionals believe that the prevalence of drug dependence in combination with mental disorders is increasing, although some argue that this is due to a greater awareness of this issue and/or changes in the diagnosis and the classification of psychiatric diseases and disorders and/or restructuring of healthcare systems. It may also be that as drug use has become more common in the general population in many European countries it will also have become more common among those with mental health disorders. In fact, as both problem drug use and mental illness are both associated with social marginalization then it would not be surprising that the increase in problem drug use that occurred in most of Europe during the 1980s and 1990s was reflected in a higher prevalence of drug problems among those with chronic and long term mental health problems.

Some of the larger studies carried out in Europe during the last few years illustrate the increasing identification of co existing mental health and psychiatric problems. For an overview of European studies on prevalence of co-morbidity, see the following web-pages

<http://annualreport.emcdda.eu.int/en/page123-en.html> and
<http://annualreport.emcdda.eu.int/en/elements/oltab12a-en.html>.

In Denmark, the number of psychiatric hospital patients with a secondary drug-related diagnosis increased by 60% between 1995 and 2003. Most of these patients were diagnosed with cannabis use or polydrug use problems (Sundhedsstyrelsen, 2004). In Ireland, the rate of first admissions of drug users to inpatient psychiatric services increased almost fourfold between 1990 and 2001 (EMCDDA, 2004a).

In Finland, data from the Hospital Discharge Register show that the number of treatment periods associated with simultaneous drug-related and other mental health problems increased from 441 in 1987 to 2,130 in 2001. Treatment periods for opiate use combined with psychiatric disorders have tripled since 1996. This is consistent with the increase in drug use, although no direct causal relationship can be assumed (EMCDDA, 2004a).

In an overview of lifetime-prevalence of mental disorders using ICD-10 criteria in 351 opiate-dependent clients in treatment centres in Hamburg, Germany, 45% of the clients (50% of males, 31% of females) had no diagnosed mental disorder, whereas the other 55% had an average of 1.3 diagnosed disorders (1.0 for males, 1.8 for females) (Krausz, 1999). A Swedish consecutive cohort of 1,052 patients treated for substance dependence, 78% had at least one life-time personality disorder (Fridell, 1996).

In a review of different studies, Uchtenhagen and Zeiglgänsberger (2000) concluded that the most common psychiatric diagnosis among drug users is personality disorder, affecting 50% - 90%, followed by affective disorder (20%

- 60%) and psychotic disorders (20%). Between 10% and 50% of patients exhibit more than one psychiatric or personality co-morbidity disorder.

In a review of international studies on psychopathology in drug-dependent subjects, Fridell (1991, 1996) outlined a clinical picture of co-morbidity in drug addiction that has been confirmed by his own studies in Lund, Sweden. Three main groups of disorders could be identified: personality disorders (65% - 85%), depression and anxiety states (30% - 50%), and psychoses (15%). Verheul (2001), in his overview of six studies of treated addicts, found that antisocial (23%), borderline (18%) and paranoid (10%) personality disorders were particularly prevalent. Similarly, the British COSMIC study (Weaver *et al.*, 2003) found that three-quarters of clients in inner-city drug treatment centres suffered from one or more mental disorders: psychotic disorders (8%), personality disorders (37%), depression and/or anxiety disorder (68%).

A Norwegian study compared gender differences in poly-substance clients (85% heroin users) in comparison to pure alcoholics. The clinical sample had a very high level of psychiatric and personality disorders (93%). Among the findings were that female poly-substance clients differed significantly from all other groups by a high level of major depression, simple phobia, and borderline personality disorder. Male poly-substance abusers had a higher co-occurrence of an antisocial personality disorder (Landheim *et al.*, 2003). For a long time, it has been known that women drug users have often experienced traumatic sexual abuse (e.g. Beutel, 1999).

Aetiology

Discourse on the aetiology of co-morbidity often becomes a 'chicken and egg' type of discussion with great difficulty in identifying what occurred first and the extent to which the problems were causally related. Many authors argue that psychologically frail persons are more susceptible to drug use and drug problems and may consider drug use as a kind of self-medication (e.g. Khanzian, 1985). Research evidence does indicate that psychiatric and personality disorders usually occur before substance use disorders, i.e. they increase individuals' susceptibility to such problems (e.g. Kessler *et al.*, 2001; Bakken *et al.*, 2003). However, psychiatric disorders may also be aggravated by drug use (e.g. for depression: McIntosh and Ritson, 2001) or occur in parallel. Drug use can also be perceived as a component or symptom of a psychiatric or personality disorder (e.g. Murray *et al.*, 2003).

Krausz (1996) suggests four categories of dual diagnosis:

- A primary diagnosis of a mental illness, with a subsequent (dual) diagnosis of substance misuse that adversely affects mental health.
- A primary diagnosis of drug dependence with psychiatric complications leading to mental illness.
- Concurrent diagnoses of substance misuse and psychiatric disorders.

- A dual diagnosis of substance misuse and mood disorder, both resulting from an underlying traumatic experience, for example post-traumatic stress disorder.

Specific attention has been paid lately to the role of cannabis in inducing schizophrenia (e.g. Clarke, 2005). In an early major study (Andreasson *et al.*, 1987) the association between cannabis use and schizophrenia was measured in a 15-year follow-up of over 45,000 Swedish conscripts. It seemed that the relative risk for schizophrenia among heavy users of cannabis was up to 6 times higher compared to non-users, although this calculation was revised later. Case-control studies have revealed that schizophrenic patients are more likely to use cannabis than other psychiatric patients or the general population (Hall and Pacula, 2003). A prospective cohort study of 2,437 young people between 14 and 24 with and without predisposition for psychosis found that cannabis use moderately increased the risk of psychotic symptoms in young people but had a much stronger effect in those with evidence of predisposition for psychosis (Henquet *et al.*, 2005). It is also likely that cannabis exacerbates schizophrenia as Linszen *et al.* (1994) registered after a follow-up of 93 psychotic patients over a year. Correlations have also been found between ecstasy use (particularly an early start of ecstasy use seems to be linked to depression), anxiety and aggressiveness (Wartberg *et al.*, 2004).

Diagnoses

Diagnosing co-morbidity is difficult. The psychiatric status is influenced by drug use and they can also be triggered by it. Different psychiatric disorders will only be visible after the somatic and social status have stabilised. Withdrawal symptoms may diffuse the clinical picture. Finally, drugs may disturb a normal psychological development in adolescence (Berthel, 2003). A correct diagnosis is, however, essential for effective treatment and more and more refined diagnostic instruments have become available. Multifunctional instruments such as the Addiction Severity Index (ASI) can be used in diagnostics, treatment follow-up and research. For more extensive treatment planning other, more refined, psychiatric assessments including SCID, CIDI, MINI and various psychological tests must be applied. (See Chapter 19 for information on these diagnostic instruments.)

Treatment caught between systems

Co-morbidity is, as we have seen, a complex syndrome and treatment has to take this into account. A Cochrane Review (Jeffery *et al.*, 2000) found only six relevant studies with relatively low quality and concluded that 'there is no clear evidence supporting an advantage of any type of substance misuse programme for those with serious mental illness over the value of standard care'.

The most essential principle seems to be multi-disciplinarity and one of the main obstacles both to diagnosis and treatment of co-morbidity is the fact that psychiatric services and drug treatment services often have different structures, different sources of funding and belong to different hierarchies.

In some countries, separate administrative systems complicate co-operation, for example in Spain where psychiatry is under the direction of the Ministry of Health and drug services under the Ministry of Interior (although this changed after the last election), or in Sweden, where psychiatry is part of the health system whereas drugs services are part of the social service system. In Germany different financial systems involving the State and different health insurance and social insurance organisms foster a tendency to refer difficult clients, such as co-morbidity patients, to another system without regard to the most effective intervention. The outcome is a lack of continuity in the treatment process and discord between different care-givers.

In Denmark (Andreasen, 2002), Finland (Mäkelä and Poikolainen, 2001), the United Kingdom (DH, 2002) and Norway (Sosial- og helsedepartementet, 1999), the policy is that the treatment services, at least for the seriously mentally ill with substance use problems, should be based in psychiatry, possibly involving external drug therapists or services or, as in Denmark, where the main psychiatric hospitals have established special co-morbidity units.

In Eastern European countries, drug treatment has traditionally been incorporated in psychiatry ('narcology') and in some countries this tradition continues and co-morbidity patients are routinely treated in these hospitals. In Hungary a specialized unit for co-morbidity has opened in a psychiatric hospital. Elsewhere, as for example in the Czech Republic addiction problems usually are considered more urgent than mental problems, since it would be difficult to treat the psychiatric disorder when the addiction distorts the clinical picture.

However, drug users are often met with suspicion in psychiatric services, and may be refused admission, as may also happen to users who are stable on substitution treatment. In Spain, for example, most psychiatric services exclude clients with substance disorders and their staff have no appropriate training. From Italy it is reported that there are no clear rules for the referral of clients from drug treatment services to mental health services and that there is resistance in mental health services because of lack of expertise. A survey among Austrian psychotherapists revealed that only few are willing to admit drug-addicted patients as clients (Springer, 2003). In Norway, referral from low-threshold drug services to psychiatric treatment is reported to be difficult.

In other countries, e.g., France, Italy, the Netherlands, Spain and the UK, drug users are normally cared for within the drug treatment system and referrals to psychiatric services are made only when disorders are so severe that hospitalisation is necessary. In Austria and Luxembourg, drug treatment staff may follow up their clients who have been referred to psychiatric hospitals.

Still clients may be excluded from drug treatment because of their mental problems. One argument against mixing co-morbidity clients with other drug clients is that these clients require a slower and more flexible therapeutic and medical approach. In Greece about half of drug treatment programmes do not admit drug users with psychiatric disorders. In drug-free residential treatment in Slovenia, and also in other countries, treatment programmes require patients to be drug-free as a condition for admission. In the case of dual diagnosis patients, this presents a serious obstacle, as complete abstinence might require the termination of other treatments, which is not always possible.

A recent review on the management of co-morbidity in mental health and addiction services in Ireland (MacGabhann *et al.*, 2004) revealed that there is no systematic co-ordination of care evident in any health board area. Both addiction (58%) and mental health (43%) services reported exclusion criteria applied to co-morbidity clients.

Some professionals consider that all pharmacotherapy should be avoided in drug-addicted persons because of the risk of combined addiction, e.g. to heroin and benzodiazepines. In the Czech Republic today 10% - 20% of drug treatment clients use medication prescribed by a psychiatrist, this would have been unimaginable some years ago. In Greece, too, concurrent medication for psychiatric symptoms is extremely rare in drug treatment. In other countries, there might be tendency to prescribe psychopharmacological medication indiscriminately to drug users, partly because of a lack of time to conduct the necessary investigations. But low compliance among drug users makes pharmacological treatment of psychiatric conditions difficult and, in addition, the combined use of narcotic substances and medicines may, if not properly supervised, lead to interactions between illicit and prescribed medicines or to neutralisation of the prescribed medicine.

Co-ordination made possible

Given the different points of departure in psychiatric and drug services and the evident need for treatment and care of co-morbidity patients, different cooperation models have been developed, often at the local level. Working groups involving representatives of both drug services and mental health services are often an important medium of exchange, cooperation and networking. Increasingly, such arrangements are supported or even stipulated by governments.

In Denmark, formalised bridges have been set up between psychiatric hospitals and local drug services. In France, Italy and the Netherlands official regulations or protocols oblige drug services to maintain close liaison and preferably establish formal regional agreements with the psychiatric services concerning procedures for referrals and clinical information exchange (Olin and Plaisait, 2003). However, a study revealed that more than half of Dutch dual diagnosis patients believe that such agreements do not result in improved care (Van Rooijen, 2001).

One further step is taken by initiatives that ensure integrated treatment, where one team handles the treatment of both disorders. This has the advantage that the client is not confronted with contradictory messages and continuity of treatment is made possible. In most countries there are only a few specialised integrated programmes or units for co-morbidity clients and the availability is far from meeting the demand.

Specialised residential treatment units for co-morbidity patients have been set up in several countries, e.g. Austria, Belgium, Denmark, Hungary, the Netherlands, Spain and the UK. Their capacity is usually limited and often, as in one Dutch specialised clinic, the patients are long-term addicts, suffering from severe mental disorders (psychosis, affective disorders, anxiety disorders, ADHD, post-traumatic stress disorder, neurological disorder or Korsakov syndrome). Additionally, most of the clients had a history of long neglected physical problems (sexually transmitted diseases, Hepatitis B and C, HIV, and other illnesses). Many have financial problems, are homeless, or without meaningful social relationships.

A new outpatient service with experts in psychiatry and abuse treatment was set up in Copenhagen in 2004. It provides medical treatment for mental illnesses as well as drug abuse, i.e. methadone as well as anti-psychotic drugs, along with psychotherapy, social activities and other activities for users and their relatives. The centre has an inter-disciplinary team consisting of a doctor, a psychologist, a social worker, a social and health care assistant, nurses and social education workers experienced in psychiatry and abuse treatment (see www.kabs.dk).

The most common implementation of an integrated treatment model is the employment of psychiatrists in drug treatment services and/or drug workers in mental health services. This might be the most practical solution in smaller regions where specialised, integrated clinics are not a viable solution. Psychiatrists are employed at the Drug Treatment Centre Board, Trinity Court, to support the provision of addiction services and provide psychiatric assessment and treatment for those with drug addiction the Dublin area. They work closely with the general practitioners working in Drug Treatment Centres. In Portugal, it is a mandatory for accreditation and certification for a treatment centre to have at least one psychiatrist on the staff. However, not all psychiatrists working in drug treatment services have the specialist knowledge and training necessary to treat problem drug users. United Kingdom guidelines stress that professionals from both addiction and mental care services should be involved in planning the care of a dual diagnosis client in order to prioritise care pathways (DH, 2002). In Norway 34 Psychiatric Youth Teams (PUT) work countrywide with young problem drug users. The teams include professionals such as doctors, psychiatrists, social workers and child care workers and offer consultations on an out-patient basis.

Case management is a method used with co-morbidity patients to avoid them being constantly referred from one service to the other with frustrating results. Case management for co-morbidity patients means offering practical and psychological help, supplemented by co-ordination of different care activities

for individual clients. The case manager, backed by a team, is coordinator, personal agent, alter ego, contact person and outreach worker all in one. A review of five international studies (four with control groups) with co-morbidity patients showed that case management has small positive effects on patients satisfaction, drug use, psychiatric symptoms, social skills, and utilisation of care (Wolf *et al.*, 2002). If combined with assertive community treatment, as currently piloted in the Netherlands, Sweden and the UK, results seems particularly promising. This model can be characterised by several criteria: structural (small caseload, teamwork, co-operation); organisational (clear inclusion criteria, 24-hour crisis intervention); and content (an active approach, support and care in daily living, high frequency of contacts). Case management approaches are still rare in Europe, partly because they are expensive and partly because case managers with adequate expertise are rare.

Conclusions

Although both the structuring and level of response to co-morbidity varies considerable across Europe, all countries are faced with two related problems. The first is to address holistically the complex inter-relationship between drug use, mental and physical health problems that affect a socially disadvantaged and hard to engage population and the second is related to the practical difficulties of coordinating responses across different sectors to ensure continuity of care between specialist services of different types.

There are differences between countries but, in general, psychiatric staff often have limited knowledge of or training in drug treatment; and drug treatment staff generally are often not familiar with psychiatric diagnostic and treatment methods. Such training is important as the co-existence of drug and mental problems places particular challenges on the staff. Clients may be difficult to manage because of disruptive and aggressive social behaviour, especially those with the more severe types of personality disorders. Psychiatric health problems can vary from the minor to the severe among drug users and the demands they place on services vary accordingly. Those with severe problems may find it difficult to comply with treatment rules and requirements, such as keeping appointments or taking medication. For staff they can prove a difficult and sometimes unrewarding group to work with. Success rates can be lower and drop-out rates higher, than with other types of client. On the other hand, clients have often had many negative encounters with the support services and may therefore be reluctant or unwilling to undergo treatment.

In conclusion, the difficulties that the co-existence of psychiatric illness and drug problems pose for the treatment of both conditions are increasingly well recognised across Europe. European countries may have a shared recognition of a common problem but their responses remain diverse. In some countries, models of care are beginning to develop that support the better integration of drug and psychiatric health services, work to improve the awareness of staff, or address the practical difficulties of engaging with this particularly challenging group of clients. However overall this remains an area

requiring considerable resource investment. What is also needed is the pooling of experience of what works if we are to move in Europe from sharing a common problem to sharing an understanding of how to respond effectively to the co-existence of mental health and drug problems.

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ECCAS - European Collaborating Centres in Addiction Studies

ECCAS is a European transnational group of multidisciplinary professionals working in the field of addiction. The group's aim is to promote in-depth understanding of substance misuse and its impact on the individual, his/her family and the wider community, through appropriate scientific, clinical and social approaches and methods for dealing with it, with due respect to national policies and practices.

Although formally named in 1992, the group's origins, sponsored by EC, and subsequent development can be traced back to 1989. Its objectives are:

- (a) To advance current knowledge in the field of substance misuse through academic, research and educational activities.
- (b) To develop practical approaches and methods of preventing and dealing with the problems of substance misuse, sensitive to the needs of the individual, their families, culture and the national laws and international conventions.
- (c) To disseminate findings of research and good practice across Europe.
- (d) To evaluate the impact of interventions whether preventive, treatment or care of individual, families and communities
- (e) To influence agencies which have direct or indirect input to the problem of substance misuse.
- (f) To provide support both general and specific to members of the ECCAS group.
- (g) To develop professional relationships with similar groups/associations.
- (h) To have minimal annual targets within each of the work programme areas
- (i) To work towards achieving representation for all European countries.
- (j) To ensure that ECCAS is represented at relevant European conferences and policy meetings.
- (k) To respond actively to new developments and challenges in the substance misuse field
- (l) To exploit the dynamic between the different national policies and practices

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